

# Remedial Action Plan

## Former Delbert-Smith Greenhouses

12777 Mogadore Avenue NW  
Uniontown, Ohio 44685

### Prepared by:

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### Date of Preparation:

November 18, 2016

**PANDEY**  
ENVIRONMENTAL, LLC

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## 1.0 INTRODUCTION

PANDEY Environmental, LLC (PANDEY) was authorized by the Stark County Regional Planning Committee (SCRPC) of Canton, Ohio, to develop a Remedial Action Plan (RAP), following the results documented in the Limited Phase II Property Assessment dated October 28, 2016 for the Former Delbert-Smith Greenhouses property located at 12777 Mogadore Avenue NW, Uniontown, Stark County, Ohio (parcel ID 2206217, hereafter referred to as the subject property). Prior to the VAP compliant Limited Phase II Report prepared by PANDEY in October 2016, Turn-Key Environmental Consultants, Inc. (TKEC) prepared an ASTM / Voluntary Action Program (VAP) Phase I Environmental Site Assessment for the subject property dated January 17, 2013. The subject property consists of approximately 16.83 acres and is owned by Bishopgate Properties, LLC although currently the State of Ohio has established a claim against this property for lack of payment of property taxes. Although an end use of the subject property has not been determined, it is anticipated, due to the surrounding land-use, that residential use in accordance with categories listed in OAC 3745-300-08(C)(2), is likely. The property is zoned as R-1 Single Family Residential. Unrestricted residential land use is defined as being unrestricted residential land protective for, and may be applied to, any land use, without further restriction.

Results of the Phase II Report indicate an impact from asbestos in the soil media in several sampling locations.

PANDEY personnel responsible for preparation of this report include Mr. Atul Pandey, P.E., and Mr. Nick Vallera, Environmental Scientist.

### 1.1 Site Description and Location

The subject property is situated in a residential and agricultural area east of Uniontown in Stark County, Ohio. Located at 12777 Mogadore Avenue NW, the subject property is comprised of one (1) parcel (Parcel ID 2206217) totaling approximately 16.83 acres.

The subject property was developed for commercial use and was occupied by Delbert-Smith Wholesale Greenhouse Operations until 2005. Since 2006, various demolitions activities occurred, including the demolition of three (3) greenhouses that were previously located in the field area near the center of the Property. Partial demolition of other buildings still standing on the site was also performed during this time. During the demolition, asbestos-containing materials were potentially scattered across the property, as no abatement of ACM was performed prior to demolition. The Canton City Health Department (CCHD) became involved with the project during the demolition activities when they cited the previous owner for demolishing buildings known to contain ACM without proper abatement. The subject property is currently vacant. Adjoining properties were either residential or agricultural in current and prior uses. Although an end use of the subject property has not been determined, it is anticipated, due to the surrounding land-use, that residential use is likely. The property is zoned as R-1 Single Family Residential. The property location and boundary are shown on Figure 1.

Bishopgate Properties, LLC owns the property. However, currently the State of Ohio has established a claim against this property for lack of payment of property taxes, and intends to take ownership of the property in the future to sell for redevelopment. A detailed account of the site description and history can be found in the *Phase I Site Assessment*, January 17, 2013, prepared by Turn-Key Environmental Consultants, Inc., and the *Limited Phase II Property Assessment*, October 28, 2016, prepared by PANDEY.

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## 2.0 HEALTH AND SAFETY PLAN

Due to the historic property use and the nature of some of the chemicals of concern being remediated, Personal Protective Equipment (PPE) will be required for the construction worker and the observation personnel. This includes personal levels of protection as determined through use of the U.S. Department of Health and Human Services National Institute for Occupational Safety and Health, “NIOSH Respirator Decision Logic,” of May 1987 (or as updated). In addition, a Health & Safety Plan (HASP) will be implemented during remedial activities that are consistent with or exceed the guidelines provided in OSHA Standards, “U.S. EPA’s Occupational Health and Safety Manual”, and Chapter 9 of “U.S. EPA Standard Operating Guides”. Appropriate changes to PPE will be made as deemed necessary by the health and safety office in charge.

PANDEY will follow procedures and protocols to protect workers in the event that hazards from site conditions are encountered during the course of the remedial activities. The HASP will be prepared to establish health and safety procedures resulting from actual or potential contact with contaminated materials and the requirements pursuant to the OSHA Standards for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

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### **3.0 REMEDIAL ACTION GOALS & OBJECTIVES**

#### **3.1 Introduction**

Remedial action objectives (RAOs) are established to protect human health. RAOs are based on site-specific chemicals of concern, contaminated media, exposure routes and receptors. The soils across the property (from an approximate depth of zero (0) to six (6) inches below ground surface (bgs)) located in the field area between the on-site structures and a distinct tree line that bisects the property, are the contaminated media of concern at the subject property.

#### **3.2 Remedial Action Objectives**

The media of concern includes soils in the field area between the on-site structures and a distinct tree line that bisects the property from depths of zero (0) to six (6) inches bgs. The overall objectives for the remedial actions described in this RAP include the following:

- Abatement of regulated asbestos containing materials (RACM) from the on-site greenhouses and buildings.
- Demolish the on-site greenhouses and buildings following abatement of RACM.
- Remediate the impacted soil media within the remediation footprint that have been tested and shown to have asbestos contamination. This area is located between the on-site structures and the tree line located near the center of the property.
- Minimize the potential for migration of chemicals of concern from the soil to other media (i.e. surface water pond, surface soils on adjacent areas of property).

#### **3.3 Property End Use**

The subject property is situated in a dominantly residential area of Uniontown, Ohio. Redevelopment plans for the subject property have not been finalized at this point. However, this RAP assumes future land use at the site as unrestricted-residential in accordance with the categories listed in OAC 3745-300-08(C)(2).

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## **4.0 REMEDIAL ACTION IMPLEMENTATION**

The property currently has approximately six (6) standing structures which are in poor condition. Multiple areas of all structures on the property were sampled by a Certified Asbestos Hazard Evaluation Specialist (CAHES) and determined to contain Regulated Asbestos Containing Materials (RACM). The RACM from the standing structures on the subject property will be lawfully abated. Immediately following the abatement of RACM in the standing structures on the property, the buildings and greenhouses on the site can be demolished. The proposed demolition area can be found on Remediation Area Map included as Figure 3 of this Report.

The zero (0) to six (6) inch horizon of soil across the entire property shows multiple areas of asbestos contamination. The presence of chrysotile asbestos fibers was observed in five (5) separate soil sampling locations within the 0' to 0.5' soil horizon. Although there are no applicable VAP standards for the asbestos concentrations in soil, any presence of asbestos fibers discovered in the soil media is considered contaminated.

The entire zero (0) to six (6) inch horizon of soil located between the on-site greenhouses and the tree line located near the center of the site will be excavated and removed to an off-site landfill, in order to remedy the contamination. The proposed excavation area can be found on the Remediation Area Map included as Figure 3 of this report.

The soils to be remedied cover an approximate 134,000 square foot area. The approximate amount of soils estimated to be removed ranges between 2,500 cubic yards or approximately 3,750 tons. This range was calculated by assessing the length and width of the remediation area to an approximate depth of six (6) inches for the excavation.

### **4.1 Permitting**

All necessary permits and approvals will be obtained prior to the planned demolition, abatement and remediation activities at the subject property. The site is located at 12777 Mogadore Avenue NW in Uniontown, Ohio, surrounded by residential land. It is



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anticipated that the following permits will be required prior to beginning remedial activities.

#### **4.1.1 Notification of Asbestos Demolition**

Prior to the demolition of the on-site structures, the buildings and greenhouses will have the RACM abated. A notification of asbestos demolition and renovation permit must be submitted to the Ohio EPA ten (10) working days prior to the abatement activities. This permit will be completed by the asbestos abatement contractor performing the work on-site.

#### **4.1.2 State & Local Demolition Permits**

Immediately following the asbestos abatement, prior to the on-site structures being demolished, all applicable state and local demolition permits will be completed. These permits include notifying local township departments and utility providers. Local utility lockouts and permits for maintaining traffic flow during demolition will be completed by the demolition contractor performing the work on-site.

#### **4.1.3 Storm Water Pollution Prevention Plan (SWPPP)**

Prior to excavation activities, a Storm Water Pollution Prevention Plan (SWPPP) must be prepared. This SWPPP will take special precaution to protect the surface pond (located on the southern portion of the property), as well as the surrounding area from activities related to the demolition, abatement and excavation work being performed across the subject property. Upon completion of remedial activities, the site should also be seeded for soil stabilization and erosion control purposes.

#### **4.1.4 Notice of Intent (NOI)**

A Notice of Intent (NOI) should be filed with the Ohio EPA Northeastern District Office (NEDO). The purpose of the NOI is to provide notice to the Ohio EPA that construction/remedial activities will be occurring at the subject property that could impact surface waters of the State. The NOI requests coverage of the property under the Ohio EPA regulated Nationwide National Pollutants Discharge Elimination (NPDES)

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general permit. This should be followed by a Notice of Termination (NOT), closing the general permit, once the excavation is completed.

#### **4.2 Plugging & Abandoning of ODNR and Potting Building Wells**

Two (2) existing wells were observed to be on the subject property during PANDEY's site walk performed on May 6, 2016. One (1) of the wells was identified on the ODNR database as being located on the northern portion of the property towards Greenhouse Street NW. The second well was observed to have been in the Potting Building, which was utilized during historical greenhouse operations. An attempt was made to redevelop and sample both wells during the Phase II investigation. However, both wells were unable to be sampled due to obstructions being encountered in each well. Both wells have unprotected, open metal casings which are exposed to the environment. As part of the remedial activities to occur on the subject property, these two (2) existing wells will be plugged and abandoned in accordance with Ohio EPA technical guidance.

#### **4.3 Site Preparation**

A portion of the subject property is covered by brush and overgrown weeds. This area is located on the western side of the greenhouses and continues up to the tree line near the central portion of the site. The land will be cleared during remedial activities as the top six (6) inches of the soils in the area are excavated and hauled off-site. The brush, overgrown grass and weeds will be cleared during this process as the contractor stages their equipment and prepares for the remedial excavation.

#### **4.4 Abatement of RACM in On-Site Structures & Demolition**

The property currently has approximately six (6) standing structures including, a Potting building, a Sales building, an Office building, and three (3) greenhouses. All structures are in very poor condition and are not habitable. The three (3) greenhouses on the property are partially collapsed. All structures on the property were surveyed during the Phase II Property Assessment for the presence of RACM. Multiple areas of all structures on the property were sampled by the CAHES and determined to contain RACM. More

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details regarding the findings are provided in Appendix H of the Phase II Property Assessment (dated October 28, 2016), prepared by PANDEY.

Abatement of the commercial buildings and greenhouses will be performed by a licensed asbestos abatement contractor under the supervision of a CAHES and PANDEY. Following the abatement of the RACM, the structures on-site will be demolished by a demolition contractor. Water trucks will be utilized, along with potentially utilizing water from the surface pond on-site, during the excavation in order to control the generation of excessive dust. The only building which contains a basement is the Sales building which is the southern-most structure on the property. The basement slab and foundation will be removed during the demolition of the buildings. Following the removal of the slab and foundations, the basement will be backfilled with a sandy soil. Existing conditions, a final site topographic map and an As-Built survey will be provided by the demolition contractor upon completion of the demolition activities on the subject property. The demolition area will be graded following the demolition of on-site structures and removal of debris.

#### **4.5 Excavation of Soils**

Soils across the property showed detections of chrysotile asbestos in the zero (0) to six (6) inch soil horizon. No samples collected from the 0.5 to one (1) foot soil horizon detected any asbestos fibers, therefore, the extent of the contamination is considered to be limited to the top six (6) inches. It is anticipated that approximately 2,500 cubic yards or 3,750 tons of soil from across the subject property will be excavated.

Prior to implementing remedial activities, a temporary construction fence will be installed around the perimeter of the remedial area for security purposes. The fence may potentially be equipped with a wind screen if dust control is needed. Water trucks will be utilized, along with potentially utilizing water from the surface pond on-site, during the excavation in order to control the generation of dust due to the close proximity of a

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residential neighborhood. Maintenance of traffic and street cleaning will also be performed during the remedial excavation of the asbestos containing soils.

The top six (6) inches of soil will be excavated and hauled off-site. Soils will be excavated using a front-end loader to remove the approximate top six (6) inches of the soil horizon. The excavated soils will be loaded onto lined dump trucks which will then be transported to Minerva Landfill located in Waynesburg, Ohio. Minerva Landfill is an EPA licensed landfill which is licensed to receive asbestos contaminated soils and materials for disposal.

Upon completion of the excavation and disposal off-site of the impacted soils across the property, confirmatory samples will be collected from the remediation area. The confirmatory samples will ensure that the remaining soils on-site meet the necessary VAP Generic Direct Contact Soil Standards (GDCSS) for unrestricted-residential land use. More details about the confirmatory sampling can be found in the Section 5.0 of this report.

Upon completion of the excavation and confirmatory sampling on the property, clean backfill materials will be hauled in and deposited in the remedial excavation area. The backfill will be compacted in place by the contractor's bulldozer, no vibrating rollers or third party compaction testing will be necessary due to the backfilled material being a single six (6) inch lift. The backfill material will be sampled prior to it being deemed acceptable to deposit on the subject property, details regarding backfill sampling are in Section 5.0 of this report.

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## 5.0 BACKFILL SOURCE SAMPLING

Soil samples will be collected from potential backfill sources prior to completion of the remedial excavation on the property. It is anticipated that a sandy material will be utilized as the backfill soil type for the subject property. A total of two (2) composite soil samples will be collected from the backfill material source location for laboratory analysis prior to it being deposited on the subject property. The composite samples will be collected from the specific area of the sand pit / commercial backfill source utilized as the material being transported to the subject property. Soil samples will be submitted to Pace Analytical, an Ohio EPA VAP certified lab (CL#0065) for analysis of chemicals of concern.

Results will be compared to the VAP GDCSS for unrestricted-residential land use. In the event that the composite samples fail GDCSS regulatory limits for unrestricted land use, the backfill source will be deemed unacceptable for use on this project and a secondary commercial backfill source will be sampled for laboratory analysis.

### Laboratory Analytical Methods

The analytical laboratory Pace Analytical, Indianapolis (CL# 0065) will perform the analysis using the following analytical methods:

- Volatile Organic Compounds (VOCs) (Method 8260)
- Semi-Volatile Organic Compounds (SVOCs) (Method 8270)
- RCRA Metals (Methods 6010/7040)

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## 6.0 CONFIRMATORY SOIL SAMPLING

Confirmatory soil samples will be collected at the base of the excavation across the property. Sample locations will be distributed in a grid pattern across the excavation area, similar to the grid pattern sampling performed during the Phase II investigation. Areas that were previously sampled and showed detections of asbestos will be included in the grid sampling.

A total of approximately 18 samples will be collected by sampling the top 6 inches of exposed soil after the excavation of contaminated soils has been completed. The samples will be collected from the exposed soil of the excavated area and placed into 4oz soil jars with Teflon lined lids. All samples will be selected for appropriate laboratory analysis by EA Group Laboratories, an Ohio EPA VAP certified laboratory (CL # 0015).

Results will be compared to the VAP Generic Direct Contact Soil Standards (GDCSS) for unrestricted -residential land use. The applicable VAP standard considers any detection of asbestos fibers in soil as contamination. Locations of samples are shown on the Confirmatory Sample Location Map included as Figure 4 of this report. In the event that confirmatory samples fail GDCSS regulatory limits for unrestricted land use /asbestos fibers are detected in the soils, the area the sample was collected from will be excavated an additional 6 inches and another confirmatory sample will then be collected from the base of that area for laboratory analysis.

### Laboratory Analytical Methods

The analytical laboratory EA Group Laboratory (CL# 0015) will perform the analysis using the following analytical methods:

- Asbestos in Soil (Polarized Light Microscopy)

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## 7.0 CLOSE OUT

Upon completion of all remedial activities at the subject property including the collection and analytical analysis of all confirmatory samples, a Notice of Termination (NOT) will be filed in order to close the NPDES general permit (obtained from the NOI) with the Ohio EPA.

After all remedial activities have been completed and all necessary permits have been closed out for the remediation of the former Delbert-Smith Greenhouses property, a Remedial Implementation Report will be prepared. The Remedial Implementation Report will summarize the details, findings, abatement, and remedial activities that occurred at the subject property along with analytical data and conclusions for the results of the confirmatory sampling and backfill material source sampling. This report will provide the documentation of the effectiveness of the remedy and the eligibility of the property for an unrestricted-residential future land use.

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## 8.0 COST ESTIMATE

The cost estimate associated with these remedial activities is presented in Table 1 of this report. All costs were developed based upon our experience with projects of this design and scope. Unit costs were obtained from remedial contractors, B&B Wrecking & Excavation, Inc. (B&B) and EA Group Laboratories, Inc. (EA Group) that have the experience needed to perform the required demolition, abatement, excavating and backfilling activities. A cost proposal from the remedial contractor, related to performing the necessary remedial activities is included as Appendix B of this report. Also, a cost estimate from the asbestos abatement contractor is provided in Appendix B of this report.

The costs presented in Table 1 of this report are based on excavating the maximum estimated amount of 3,750 tons of soil which corresponds to the excavation of approximately six (6) inches of soil across the remedial excavation area. In the event that confirmatory sampling determines a need for further excavation past the depth of six (6) inches, an additional three (3) inches of soil will be removed across the remedial excavation area. Excavating an additional three (3) inches of soil would create an additional 1,875 tons of soil for disposal off-site. If this is deemed necessary, the final depth of the remedial excavation would extend to approximately nine (9) inches bgs and generate an approximate total of 5,625 tons of soil for removal to a landfill. Thus, the actual volume of soils excavated from the subject property could vary anywhere from 3,750 to 5,625 tons.



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## **9.0 SCHEDULE**

The remediation implementation schedule is included as Appendix A of this report. The remediation activities and reporting are expected to take approximately 10 months.

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## 10.0 STATEMENT OF LIMITATIONS AND QUALIFICATIONS

The subject property has been examined based on best professional judgment and current property assessment evaluation methods. These methods include requirements of ASTM and VAP Standards and other professional site assessment guidelines. The evaluations, assessments, and conclusions stated in this report represent judgment and/or opinions which are based solely upon visual and analytical observations made during the site investigation.

Any reuse of this information, assessment, or conclusions contained herein by parties other than those mentioned in Section 1 of this report, shall be at the sole risk or liability of the party undertaking the reuse of this information.

## FIGURES

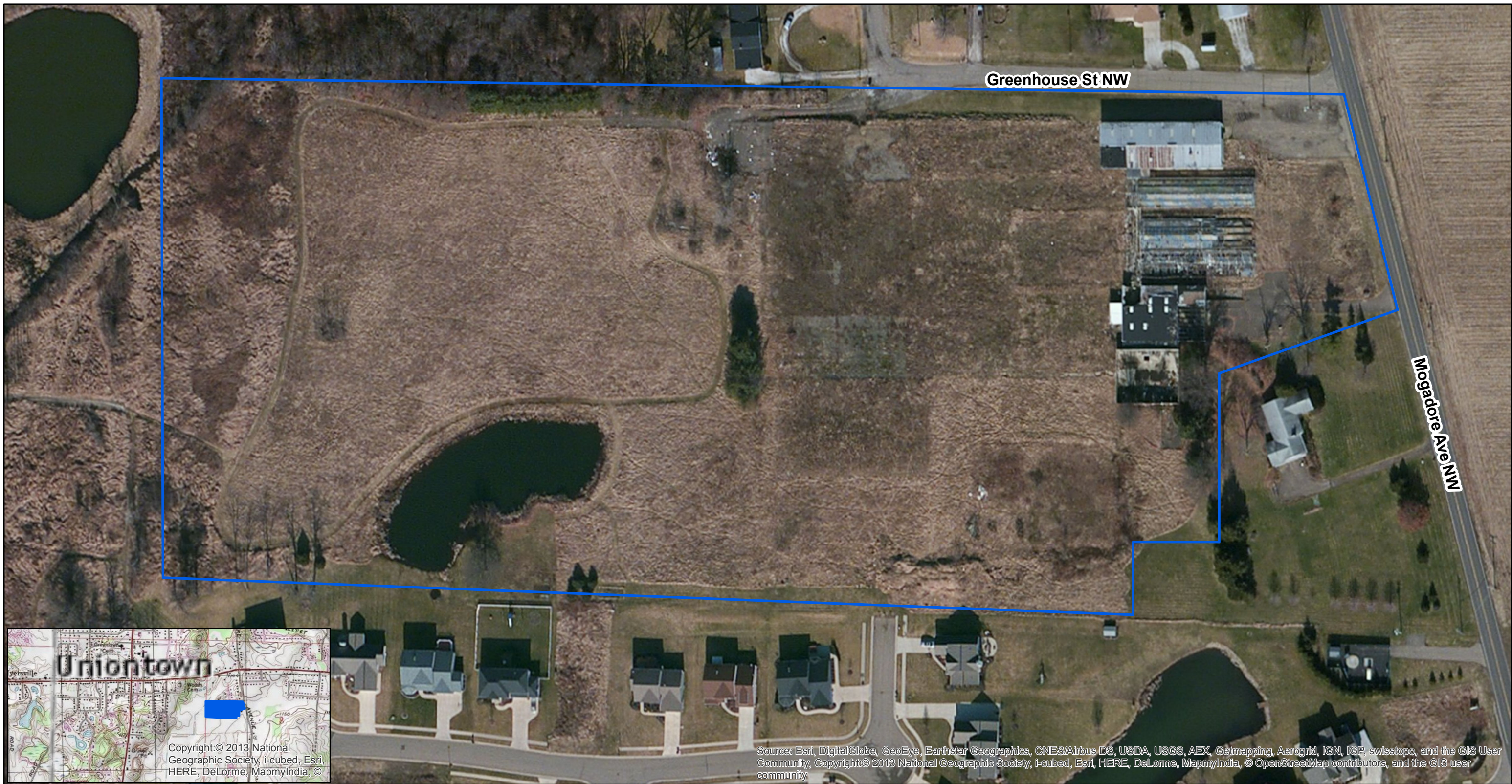
Figure 1: Property Location map


Figure 2: Comprehensive Data Figure Lead Concentrations

Figure 3: Remediation Area Map

Figure 4: Confirmatory Sample Location Map





 Property Boundary

0 80 160 240 320 400 Feet



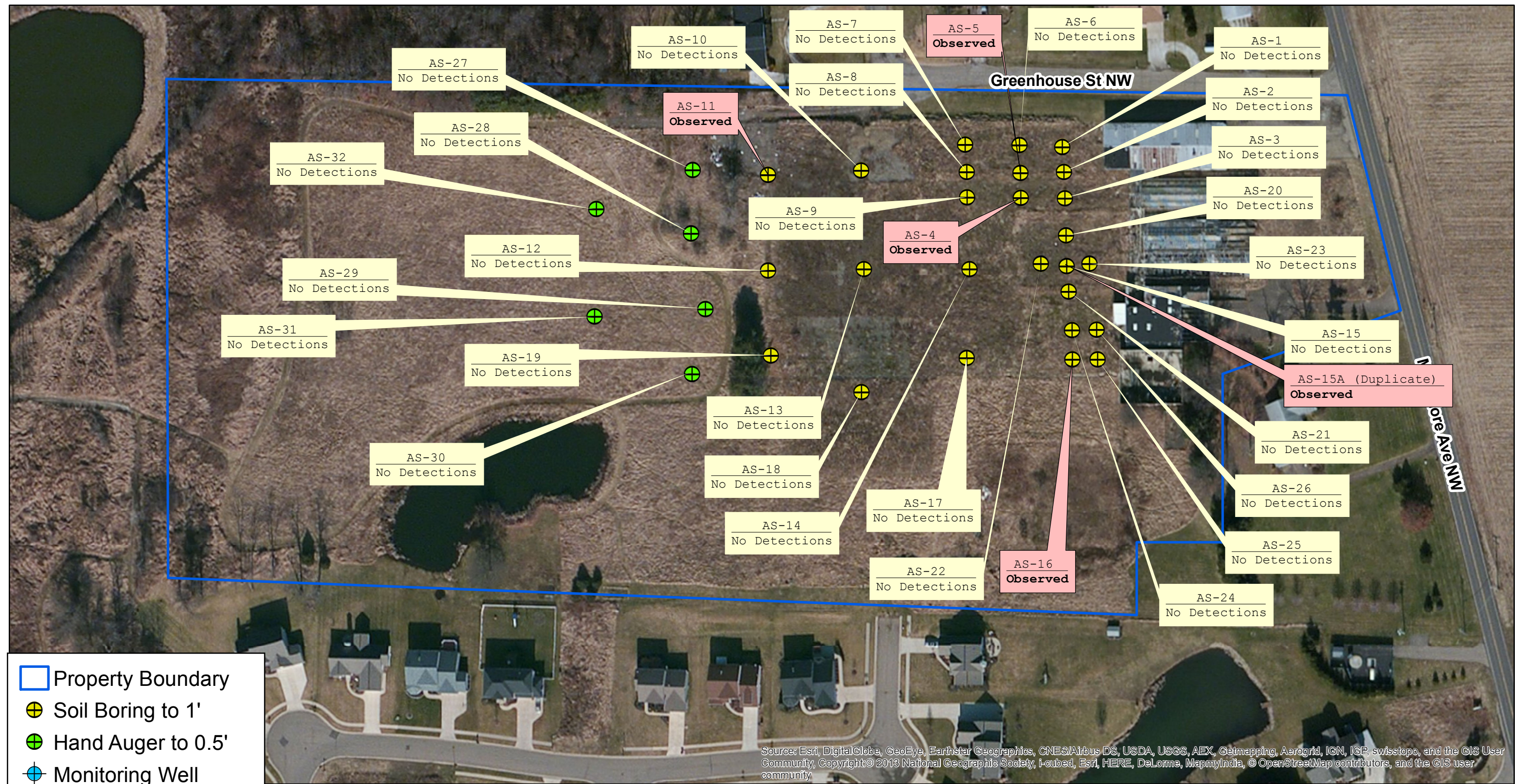
**RAP**  
**12777 Mogadore Ave NW**  
**Uniontown, Ohio 44685**

**Figure 1**  
**Property Location**

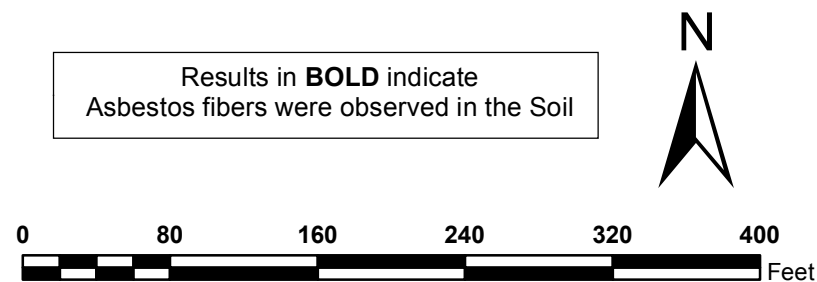
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- Property Boundary
- ⊕ Soil Boring to 1'
- ⊕ Hand Auger to 0.5'
- ⊕ Monitoring Well
- ⊙ Ambient Air
- ⊙ Soil Gas Probe
- ⊕ Soil Boring to 10'
- ⊕ Existing Well On-Site
- ⬢ Sediment
- ⬢ Surface Water



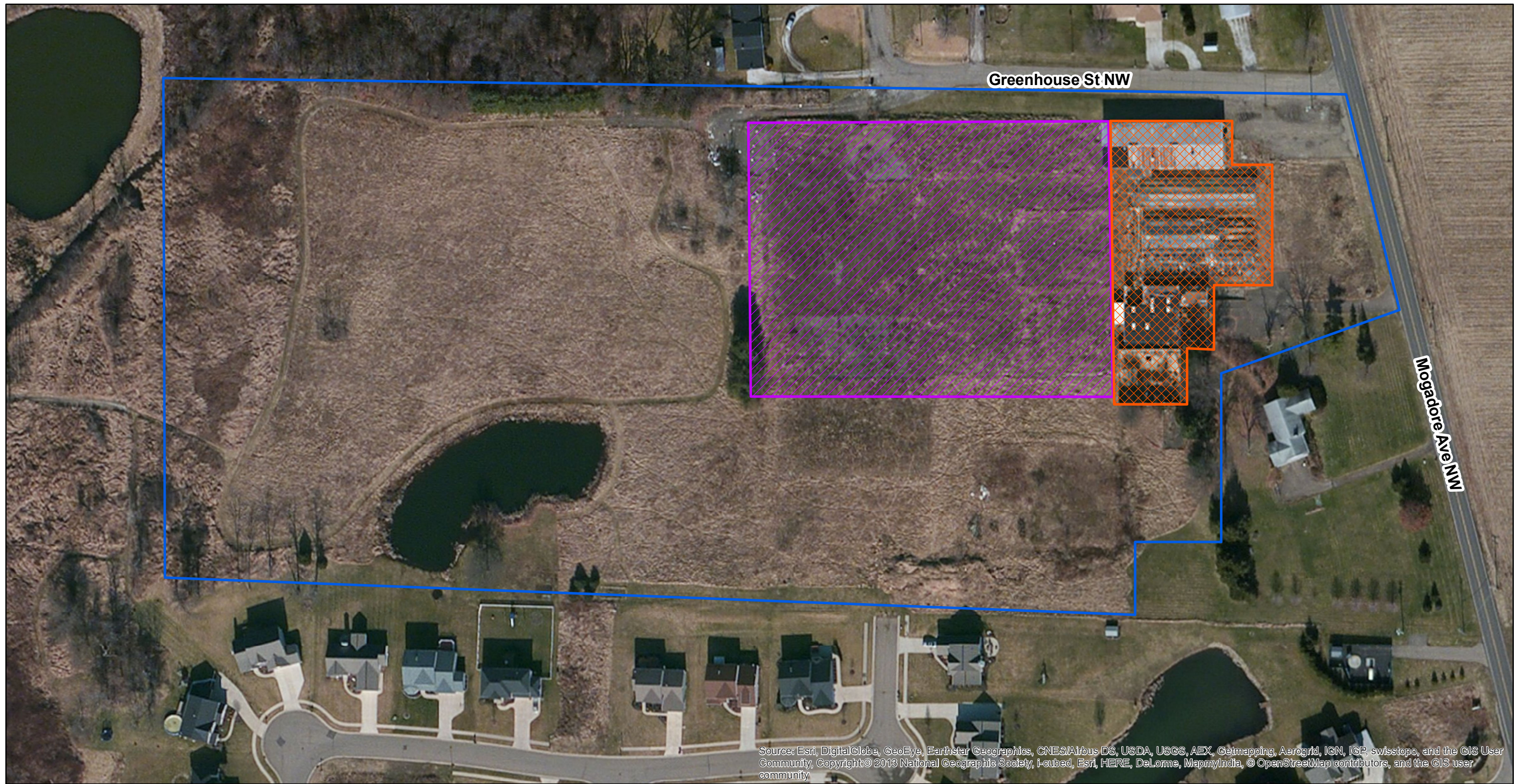
**RAP**  
12777 Mogadore Ave NW  
Uniontown, Ohio 44685




**Figure 2**  
**Comprehensive Data**  
**Figure - Asbestos Detections**

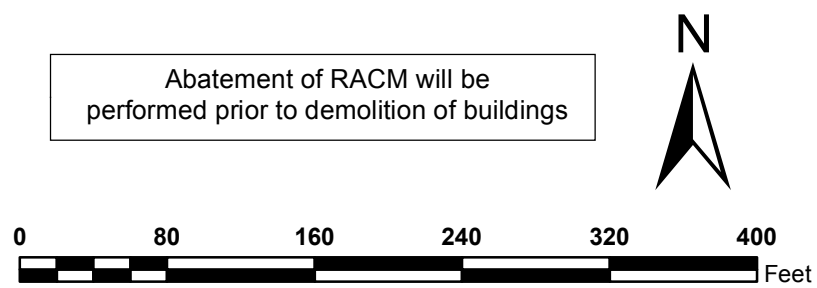
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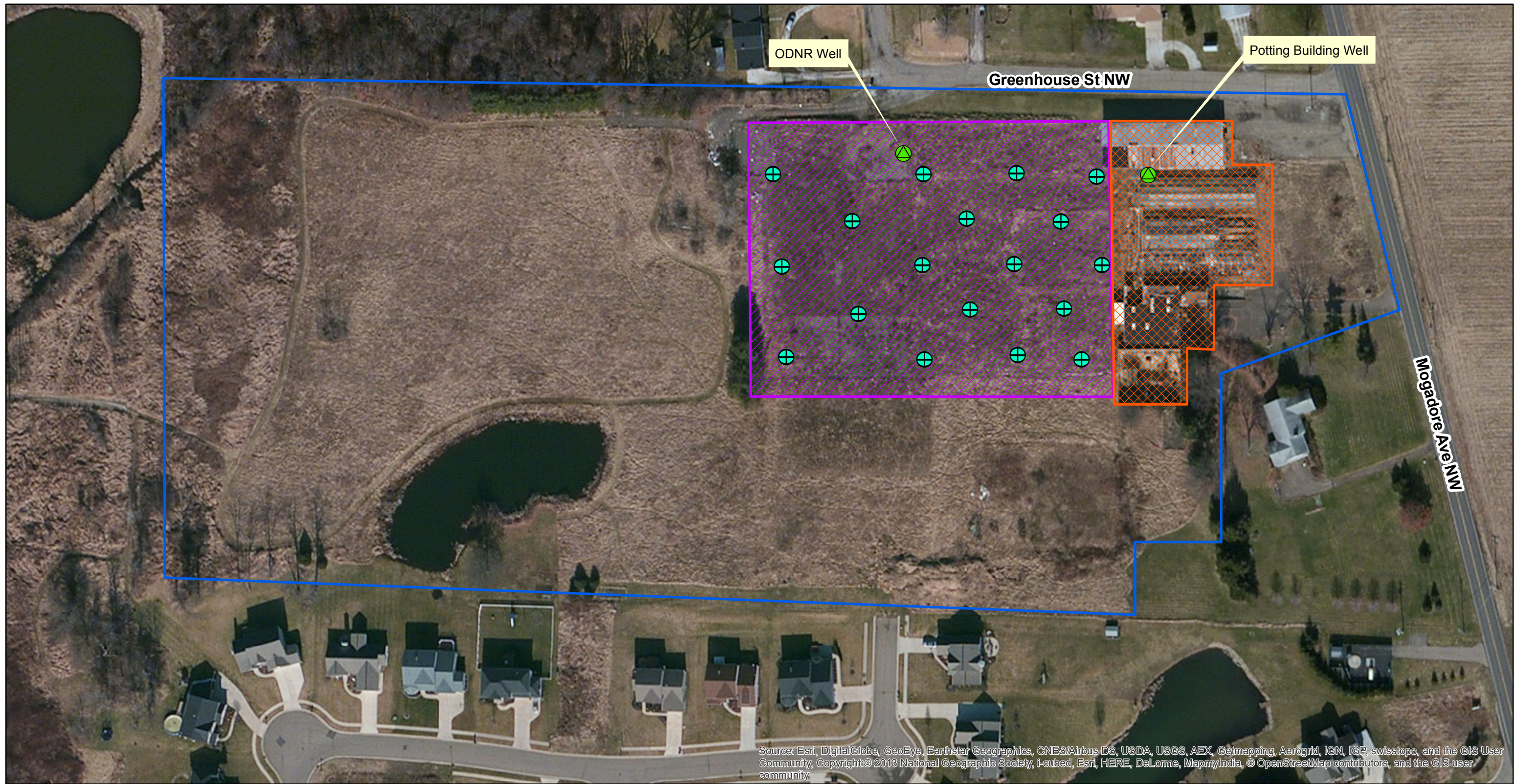


-  Property Boundary
-  Demolition Area
-  Remedial Excavation Area

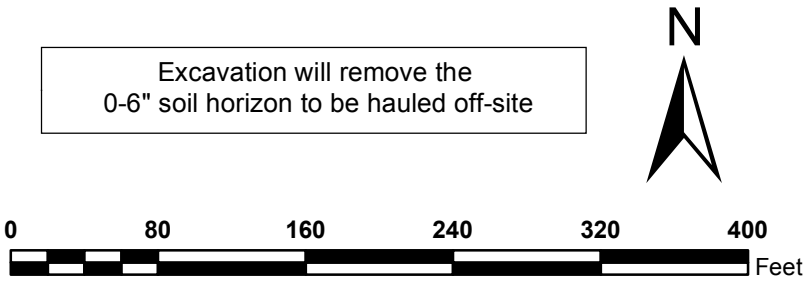


<p><b>RAP</b>  <b>12777 Mogadore Ave NW</b>  <b>Uniontown, Ohio 44685</b></p> <p><b>Figure 3</b></p> <p><b>Remediation Area Map</b></p>	<p><b>PANDEY</b>          ENVIRONMENTAL, LLC</p> <p>4100 Horizons Drive; Suite 205          Columbus, Ohio 43220          614-444-8078  <a href="http://www.pandeyenvironmental.com">www.pandeyenvironmental.com</a></p>
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- Property Boundary
- Demolition Area
- Remedial Excavation Area
- ⊕ Soil Boring to 1'
- ⊕ Confirmatory Sample
- Existing Well On-Site



**RAP**  
**12777 Mogadore Ave NW**  
**Uniontown, Ohio 44685**

**Figure 4**  
**Confirmatory Sample**  
**Locations Map**

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## TABLES

Table 1: Remedial Costs Summary



**TABLE 1**  
**REMEDIAL COSTS SUMMARY - ASBESTOS ABATEMENT, DEMOLITION OF STRUCTURES ALONG WITH EXCAVATION AND DISPOSAL OF SOIL**  
**Former Delbert-Smith Greenhouses**  
**12777 Mogadore Ave NW, Uniontown, Ohio**  
**November 18, 2016**

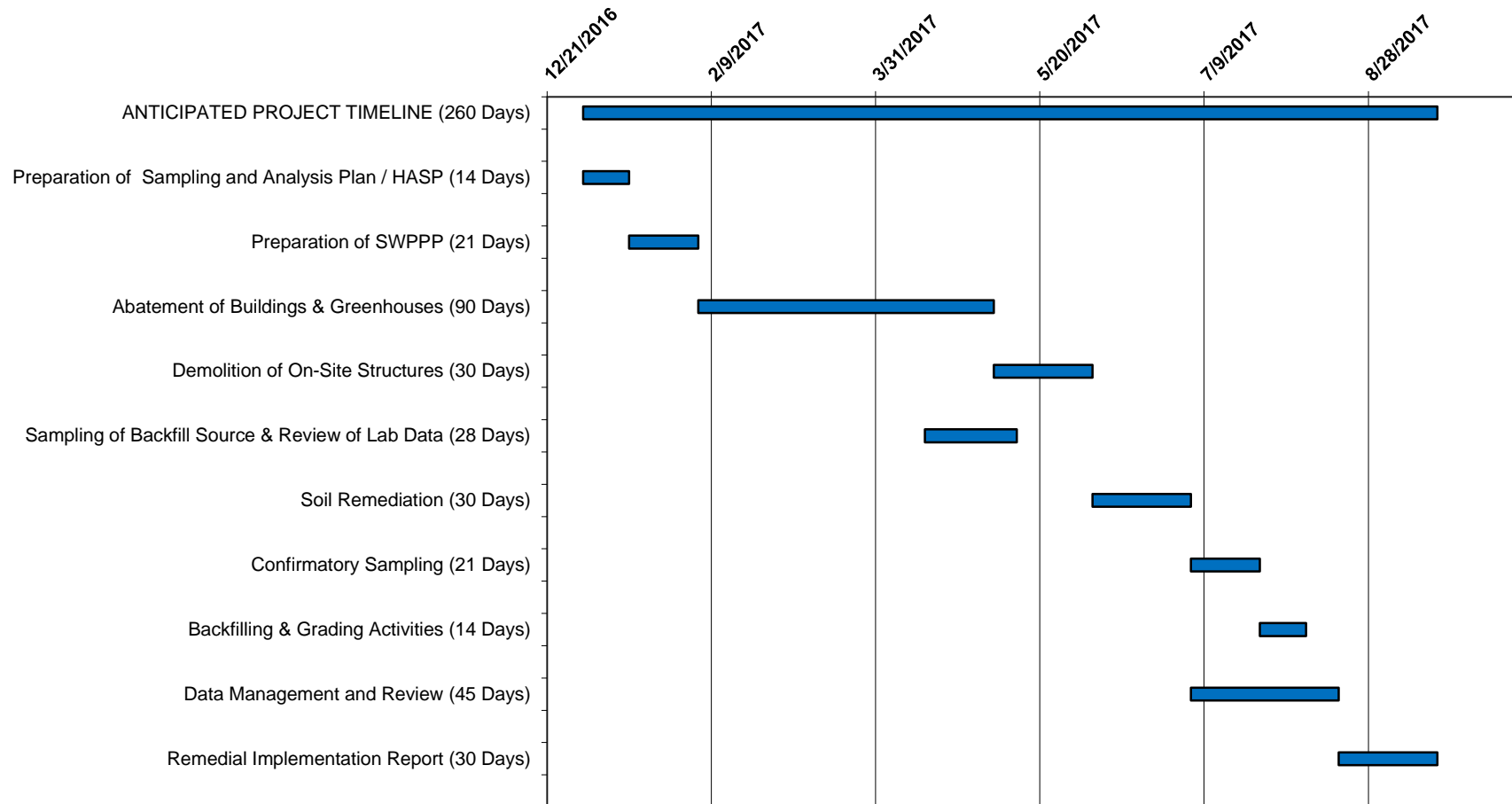
STRATEGY	CATEGORY	DESCRIPTION	COST/UNIT			Quantity	Total	Comments	Project Total
Prepare SAP / HASP, Prepare SWPPP, Asbestos abatement of greenhouses & buildings, mobilize remedial contractors, Demolish greenhouses & buildings, execute soil remediation, Plug & abandon existing wells on-site, perform sampling of backfill source materials, perform confirmatory sampling, implement reporting post-remediation.	Preparation of SAP /HASP	Preparing SAP / HASP	\$9,000.00	LS	1	\$9,000	Total SAP / HASP Costs	\$9,000	
		Subtotal				\$9,000		\$9,000	
	Storm Water Pollution Prevention Plan (SWPPP)	Storm Water Pollution Prevention Plan (SWPPP)	\$5,500.00	LS	1	\$5,500	Preparation of SWPPP	\$5,500	
		Subtotal				\$5,500		\$5,500	
	Asbestos Abatement of Greenhouses & Buildings	Abatement of RCAM & Category II Non-Friable Materials (inside buildings)	\$122,997.00	LS	1	\$122,997	See Quote from EA Group attached in Appendix B	\$122,997	
		Abatement of Category I Non-Friable Materials (inside buildings)	\$41,505.00	LS	1	\$41,505	See Quote from EA Group attached in Appendix B	\$41,505	
		Subtotal				\$164,502		\$164,502	
	Demolition of Greenhouses & Buildings	Demolition of Greenhouses & Buildings	\$232,000.00	LS	1	\$232,000	See quote from B&B Wrecking	\$232,000	
		Oversight & Management	\$20,000.00	LS	1	\$20,000	Oversight & Mgmt. of Demo. & Abatement Activities	\$20,000	
		Subtotal				\$252,000		\$252,000	
	Plugging & Abandoning of ODNR Well and Potting Building Well	Plugging & Abandoning of ODNR Well and Potting Building Well located on-site	\$6,500.00	LS	1	\$6,500	Plugging & Abandoning of on-site wells	\$6,500	
		Subtotal				\$6,500		\$6,500	
	Abatement of Asbestos in Soils & Soil Remediation / Disposal Off-Site	Abatement of Asbestos in Soils located between on-site structures & tree line (6")	\$83.00	Ton	3,750	\$311,250	See Quote from B&B Wrecking	\$311,250	
		Alternate Contingency Quantity of Soil Incidental to the removal of a thin lift (3")	\$70.00	Ton	1,875	\$131,250	See Quote from B&B Wrecking	\$131,250	
		Seeding of remedial excavation area	\$3,000.00	Acre	4	\$10,500	Seeding of remedial excavation area	\$10,500	
		Oversight & Management	\$64,000.00	LS	1	\$64,000	Oversight & Management of Remedial Activities	\$64,000	
		Subtotal for Abatement of Asbestos in Soils & Soil Remediaton				\$517,000		\$517,000	
	Sampling	Confirmation Sampling & Backfill Sampling	\$5,500.00	LS	1	\$5,500	Confirmation Sampling & Backfill Sampling	\$5,500	
		Subtotal				\$5,500		\$5,500	
	Project Management / CP Oversight	Project Management / CP Oversight	\$12,000.00	LS	1	\$12,000	Project Management / CP Oversight	\$12,000	
		Subtotal				\$12,000		\$12,000	
	Remedial Implementation Reporting	Remedial Implementation Report (Reporting)	\$18,000.00	LS	1	\$18,000	Reporting, Data Management & Review	\$18,000	
		Subtotal				\$18,000		\$18,000	
	Contingency	15% Contingency	\$148,500.00	LS	1	\$148,500		\$148,500	
		Subtotal				\$148,500		\$148,500	
TOTALS AND SUMMARY INFORMATION						\$1,138,502		\$1,138,502	
* The costs represented in the Soil Remediation section of this table are based on excavating the maximum estimated amount of a 134,000 square feet area of soil. Refer to Section 7.0 of this report for more details.									

\* The costs represented in the Soil Remediation section of this table are based on excavating the maximum estimated amount of a 134,000 square feet area of soil. Refer to Section 7.0 of this report for more details.

## APPENDIX A

### Project Implementation Schedule

# **Project Implementation Schedule for the Remedial Action Plan/Preparation of Remedial Implementation Report Former Delbert-Smith Greenhouse Property, Uniontown, Ohio**



\*This schedule generically assumes a start date of 1/01/2017

## APPENDIX B

### Remedial Contractors' Cost Estimates

B-1: B&B Wrecking Estimate

B-2: EA Group Estimate

## PROPOSAL & ACCEPTANCE



4510 E.71<sup>st</sup> Street, Suite 6  
Cleveland, Ohio 44105  
Phone: 216-429-1700 Fax: 216-429-1717

PROPOSAL SUBMITTED TO:

**Pandey Environmental**  
**Atul Pandey**

DATE 11/2/2016

JOB NAME:

**Uniontown Greenhouse Soil Abatement & Demo**

JOB LOCATION:

12777 Magadore Road, Uniontown, OH.

PROJECT DURATION

8 Weeks

START DATE

Jan 2017

We hereby submit specifications and estimates for:

B&B Wrecking proposes the demolition of the former greenhouse buildings and offsite disposal of all building materials for a lump sum fee of: \$232,000.00

**Demolition Scope:**

- Mobilize equipment front/end
- Demolition permits & required state and federal notifications and permits
- Maintenance of traffic and street cleaning as required
- Dust Control utilizing pond water and a water truck
- Haul away construction debris, and dispose of properly
- Removal all paved surfaces
- Utility Termination Coordination
- Utility capping at the Right of Way
- Development and implementation of SWPPP
- Existing Conditions and Final Site Topo and As-Built Survey
- Backfill of Basement Area in South Building after complete removal of basement slab and foundations Utilizing Sand

**Excluded:**

- Asbestos abatement
- Universal Waste
- Water or Sewer Terminations in the Street

B&B Wrecking proposes the abatement of asbestos contaminated soil as RACM in an area of 134,000 SF located West of the remaining greenhouse buildings at a depth of 6" and offsite disposal for a unit price rate of: \$83.00/Ton

**Abatement Scope:**

- Mobilize equipment front/end
- Required state and federal notifications and permits
- Maintenance of traffic and street cleaning as required
- Dust Control utilizing pond water and a water truck as included in demolition scope
- Survey as included in demolition scope proposal
- SWPPP as part of demolition scope proposal
- Haul away asbestos debris in lined dump trucks and dispose of properly
- Base quantity is 3,750 Tons of Material \$311,250.00
- Backfill of soil removed utilizing an equal quantity of sand, back-hauled
- Circumstantial Clear to prevent comingling of trees with debris
- No compaction testing or compaction of 6" lift. Material will be tracked in with a dozer.

**Excluded:**

- Buried unforeseen structure removal
- Hammering of structures to remove below threshold
- UST Removal
- Unsuitable Soil, drying, removal, or remediation
- Utility Removals

**Alternate Contingency Quantity of Soil Incidental to the removal of a thin lift: \$70/Ton**

- This 1875 ton contingency is offered at a reduced rate based upon quantity being incidental to removal in order to provide uniform subgrade and insure complete abatement. This additional quantity is offered at a rate of \$70.00/TN. This quantity is based upon a 0.25 foot margin of error. B&B Wrecking believes that based upon its means and methods used to derive the base contract price this unit price will allow for material discovered in the process of the 6" removal and allows for trucking and disposal of unforeseen structures with can be excavated with a bucket and disposed with the asbestos containing debris. Likewise, the price covers the backfill of voids created in the process. This alternate does not cover anything lower than 3 feet below existing grade and it does not include any removals that require special disposal or special processing for removal.

Abatement Subtotal	\$ 311,250.00
Demolition Subtotal	\$ 232,000.00
Base Quantity Proposal	\$ 543,250.00
Contingency of	\$ 131,250.00
Total Contract with Estimated Contingency	\$ 674,500.00

**Standard Exterior Exclusions:**

We shall provide all labor, equipment, and material to complete work in a workmanlike manner and will obtain all necessary permits. They also comply with all state and federal laws for coverage of employees, equipment, performance of work and Workers' Compensation. We are an equal opportunity employer. Demolition Contractor reserves all salvage rights and scrap metals. Price does not include any asbestos abatement, underground tank removal, hazardous waste disposal, contaminated soil removal, SWPPP Plan, and rerouting of any utilities. House furnishings, solid waste and tires in the house can be removed and disposed on a unit price basis. Proposal excludes any fees associated with utility rerouting and water tap removal. Note: It will take up to 14 days to disconnect utilities. If asbestos is present, we are licensed to perform an inspection, survey, and removal at an additional cost. If you have any questions, please contact us at 216-429-1700.

We propose hereby to furnish material and labor – complete in accordance with above specifications, for the sum of: (See Above) for demolition.

Payment to be made as follows: Net 30

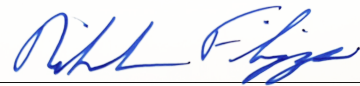
**WE ARE A CERTIFIED S.B.E. CONTRACTOR**

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from the above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above an estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

Acceptance of Proposal – The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work specified. Payment will be outlined above.

Date of Acceptance: \_\_\_\_\_

Authorized  
Signature \_\_\_\_\_



Note: This proposal may be withdrawn by us if not accepted within 30 days.

Signature: \_\_\_\_\_

Print Name & Title: \_\_\_\_\_



# EA GROUP

Environmental Analysis  
and Management

June 29, 2016 (Updated July 5, 2016)

Mr. Atul Pandey  
**Pandey Environmental, LLC**  
4100 Horizon Drive, Suite 205  
Columbus, Ohio 43220

RE: **Pre-Demolition Asbestos Survey**  
12777 Mogadore Avenue Northwest, Uniontown, Ohio  
OH40021

## Description of Work

EA Group, Mentor, Ohio was contracted by Pandey Environmental, LLC to conduct a pre-demolition asbestos survey, consisting of sampling and analysis of suspect asbestos-containing materials (ACMs), of the former greenhouse operation at 12777 Mogadore Avenue Northwest in Uniontown, Ohio, which is planned for demolition. This report provides the results of the survey.

## Asbestos Survey

EA Group's licensed Asbestos Hazard Evaluation Specialist Mike Kovell, ES34424, inspected the structures and surrounding areas and developed a sampling strategy, with bulk samples of suspect ACM procured on June 1, 2016. Homogeneous Groups of suspect ACM are identified on the *Asbestos Inspection Data Sheet* forms in Appendix A. Classification of the positively identified ACM has been made per National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations, with notations for compliance with Occupational Safety and Health Administration (OSHA) regulations where applicable. Room/area designations and sampling locations for the survey are provided on the attached field drawings in Appendix A.

## Objective and Limitations of the Inspection

The objective of this survey was to identify and sample suspect ACM associated with the former greenhouse operation at 12777 Mogadore Avenue Northwest in Uniontown, Ohio, which is planned for demolition, pursuant to NESHAPs and OSHA regulations. Debris piles are located in various areas of the buildings, and cost estimates for the disposition of these piles may vary widely from those presented in Table 2 if ACM was identified within the piles. Information regarding the general composition and location of the debris piles can be found on drawings in Appendix A. ACM debris was identified in a number of areas, and an environmental cleaning of these areas would be prudent. Estimated environmental cleaning costs are provided in Table 2, but may vary depending on the effort required.





June 29, 2016 (Updated July 5, 2016)

**Pandey Environmental, LLC**

Pre-Demolition Asbestos Survey

12777 Mogadore Avenue Northwest, Uniontown, Ohio

OH40021

Page 2

### **GENERAL LIMITATIONS**

1. EA Group cannot guarantee that all ACM has been identified by this survey.
2. Additional asbestos materials, not previously identified or quantified, are frequently encountered during renovation or demolition.
3. Actual quantities of asbestos material may vary from any estimates provided in EA Group's report due to identification of additional materials and difficulties in quantifying hidden or inaccessible materials.
4. Prior to demolition or renovation of any structure or equipment, suspect materials that were previously inaccessible or excluded from sampling should be sampled and analyzed for asbestos.

### **Asbestos Analysis**

The bulk samples were analyzed by polarized light microscopy for asbestos content at or through the Laboratory Division of EA Group, which is accredited by the National Institute of Standards and Technology – National Voluntary Laboratory Accreditation Program. The United States Environmental Protection Agency requires all materials containing greater than one percent asbestos by weight to be considered asbestos-containing materials. Composite or layered analyses were performed, depending on the nature of the material, with additional analysis (point-counting) if an initial analysis indicated less than 10% asbestos. In all cases where at least one sample from a Group was determined to be ACM, the Group as a whole is considered ACM regardless of the results for any other samples from that Group. Analytical results are provided in Appendix B.

### **Results of Asbestos Analysis**

A total of 26 homogeneous material groups were noted during the inspection, with 51 bulk samples being collected and analyzed from 24 of these groups. The remaining two groups, consisting of roofing debris and transite corrugated paneling, was not scheduled to be sampled at this time and is considered assumed ACM. Transite materials in other portions of the property were previously sampled by others and determined to be ACM.

The materials that were sampled as suspect and that was determined to be ACM are identified in Table 1, attached, which also includes the materials determined to be non-ACM and assumed ACM. Room/area designations and sampling locations are provided on the attached field drawings in Appendix A.



June 29, 2016 (Updated July 5, 2016)

**Pandey Environmental, LLC**

Pre-Demolition Asbestos Survey

12777 Mogadore Avenue Northwest, Uniontown, Ohio

OH40021

Page 3

Estimated removal costs for the identified ACMs, based on currently known or estimated quantities and assuming all materials will be removed, are provided in Table 2, attached. Please note that the presence of ACM within debris piles will necessitate the piles to be handled as ACM waste. A specific cost estimate for handling these materials will need to be developed, and may vary from those presented. Similarly, estimated costs to address environmental cleaning of areas where ACM is scattered around may vary.

Any activities that involve the handling or disturbance of ACM should be carried out by a licensed abatement contractor or other appropriately trained personnel in accordance with all applicable regulations.

If you have any questions or concerns regarding the above information, please contact the undersigned. Thank you for consulting EA Group.

Sincerely,

**EA Group**

A handwritten signature in black ink that reads "Timothy S Bowen".

Timothy S. Bowen,  
Vice President/Technical Director

A handwritten signature in black ink that reads "Mike Kovell".

Mike Kovell,  
ES34424

**Table 1. Summary of Results - 12777 Mogadore Ave., N.W., Uniontown, Ohio**

Group	ID # OH40021	MATERIAL DESCRIPTION	Material Type	RESULT
A	01	9"x9" Floor Tile & mastic; Beige & brown	M/NF1	0
A	02	9"x9" Floor Tile & mastic; Beige & brown	M/NF1	0
B	03	Drywall System Debris	M/NF2	0
B	04	Drywall System Debris	M/NF2	[+],B
C	05	Adhesive; Black (on block wall & back of foam panels)	M/NF1	[+],B
C	06	Adhesive; Black (on block wall & back of foam panels)	M/NF1	[+],B
D	07	Linoleum Flooring; Orange Square Pattern	M/NF1	[+]
D	08	Linoleum Flooring; Orange Square Pattern	M/NF1	[+]
E	Assumed	Roofing Materials	M/NF1	[+]
F	11	Adhesive; Gray (on windowsill)	M/NF1	[+],B
F	12	Adhesive; Gray (on windowsill)	M/NF1	[+],B
G	13	Window Glazing; Gray	M/NF2	[+]
G	14	Window Glazing; Gray	M/NF2	[+]
H	15	Window Caulking; Gray	M/NF2	0
H	16	Window Caulking; Gray	M/NF2	0
I	17	Drywall System w/ stippling	M/NF2	0
I	18	Drywall System w/ stippling	M/NF2	0
J	19	Light Fixture Backing	M	[+]
J	20	Light Fixture Backing	M	[+]
K	21	12"x12" Floor Tile & mastic; Beige/Gray Mottling	M/NF1	[+],B[M]
K	22	12"x12" Floor Tile & mastic; Beige/Gray Mottling	M/NF1	[+],B[M]
L	23	4" Cove Base & mastic; Beige	M/NF1	0
L	24	4" Cove Base & mastic; Beige	M/NF1	0
M	25	1'x2' Ceiling Tile; Large & Medium Hole (no mastic or spline)	M	0
M	26	1'x2' Ceiling Tile; Large & Medium Hole (no mastic or spline)	M	0
N	27	Carpet Mastic; Yellow	M/NF1	[+],B
N	28	Carpet Mastic; Yellow	M/NF1	0
O	29	Plaster; Wall	M/NF2	0
O	30	Plaster; Wall	M/NF2	0
O	31	Plaster; Wall	M/NF2	0
P	32	1'x1' Ceiling Tile; Solid (no mastic or spline)	M	0
P	33	1'x1' Ceiling Tile; Solid (no mastic or spline)	M	0
Q	09	Roofing Materials (Insulation); Brown	M/NF1	0
Q	10	Roofing Materials (Insulation); Brown	M/NF1	0
R	Assumed	Transite Corrugated Paneling	M/NF2	[+]
S	34	Greenhouse Glazing	M/NF2	[+],B
S	35	Greenhouse Glazing	M/NF2	[+],B
T	36	Adhesive; Brown	M/NF1	[+],B
T	37	Adhesive; Brown	M/NF1	[+],B
U	38	Insulation Debris; White	T	[+]
U	39	Insulation Debris; White	T	[+]
U	40	Insulation Debris; White	T	[+]

**Table 1. Summary of Results - 12777 Mogadore Ave., N.W., Uniontown, Ohio**

Group	ID # OH40021	MATERIAL DESCRIPTION	Material Type	RESULT
V	41	Insulation Debris; Gray	T	0
V	42	Insulation Debris; Gray	T	0
V	43	Insulation Debris; Gray	T	0
W	44	Tar Paper associated with Concrete Planters in Greenhouses	M/NF1	0
W	45	Tar Paper associated with Concrete Planters in Greenhouses	M/NF1	0
X	46	Gasket	M/NF1	[+]
X	47	Gasket	M/NF1	[+]
Y	48	Window Glazing	M/NF2	[+],B
Y	49	Window Glazing	M/NF2	[+],B
Z	50	2'x4' Ceiling Panel; Fissure, Pinhole	M	0
Z	51	2'x4' Ceiling Panel; Fissure, Pinhole	M	0
AA	---	Contaminated Debris Pile	Mixed	[+]
AB	---	Environmental Cleaning	Mixed	[+]

Group = Homogeneous Group identification

Material Type: S = Surfacing

T = Thermal System Insulation

M = Miscellaneous

NF1 = Non-Friable Category I

NF2 = Non-Friable Category II

Result: 0 = non-ACM

[+] = ACM

B = verified by layering & point-counting

[+][M] = Floor Tile non-ACM; Mastic ACM

(Group as a whole considered ACM for removal purposes)

Groups AA and AB contaminated with ACM

**Table 2. Estimated Cost for Removal of Known or Assumed ACMs****Pandey Environmental, LLC****12777 Mogadore Ave., N.W., Uniontown, Ohio**

[See NOTE regarding cost estimates]

<b>RACM &amp; Category II Non-Friable<sup>1</sup></b>	<b>H.G.</b>	<b>Units</b>	<b>Estimated Cost Range</b>
Insulation Debris; White	U	565 SF	\$3,786 - \$5,650
Environmental Cleaning	AB	12,178 SF	\$24,356 - \$36,534
Gasket	X	2 EA	\$30 - \$50
Transite Corrugated Paneling	R	4,300 SF	\$12,900 - \$21,500
Drywall System Debris	B	140 SF	\$420 - \$560
Contaminated Debris Pile	AA	214 CY	\$29,960 - \$34,240
Adhesive; Black (on block wall & back of foam panels)	C	200 SF	\$600 - \$1,200
Adhesive; Brown	T	100 SF	\$300 - \$600
Greenhouse Glazing	S	2,940 SF	\$11,025 - \$12,863
Light Fixture Backing	J	4 EA	\$80 - \$200
Adhesive; Gray (on windowsill)	F	6 EA	\$1,200 - \$2,400
Window Glazing; Gray	G	16 EA	\$3,200 - \$6,400
Window Glazing	Y	2 EA	\$400 - \$800
<b>Total</b>			<b>\$88,257 - \$122,997</b>

<b>Category I Non-Friable<sup>1</sup></b>	<b>H.G.</b>	<b>Units</b>	<b>Estimated Cost Range</b>
Linoleum Flooring; Orange Square Pattern	D	200 SF	\$200 - \$600
12"x12" Floor Tile & mastic; Beige/Gray Mottling	K	185 SF	\$185 - \$555
Carpet Mastic; Yellow	N	475 SF	\$475 - \$950
Roofing Materials	E	9,850 SF	\$19,700 - \$39,400
<b>Total</b>			<b>\$20,560 - \$41,505</b>

H.G. = homogeneous group

RACM = Regulated ACM, by definition


<sup>1</sup> = specific material removal technique may exclude from classification as RACM**NOTE: Unit cost ranges for various materials are based on known historical bidding results.**

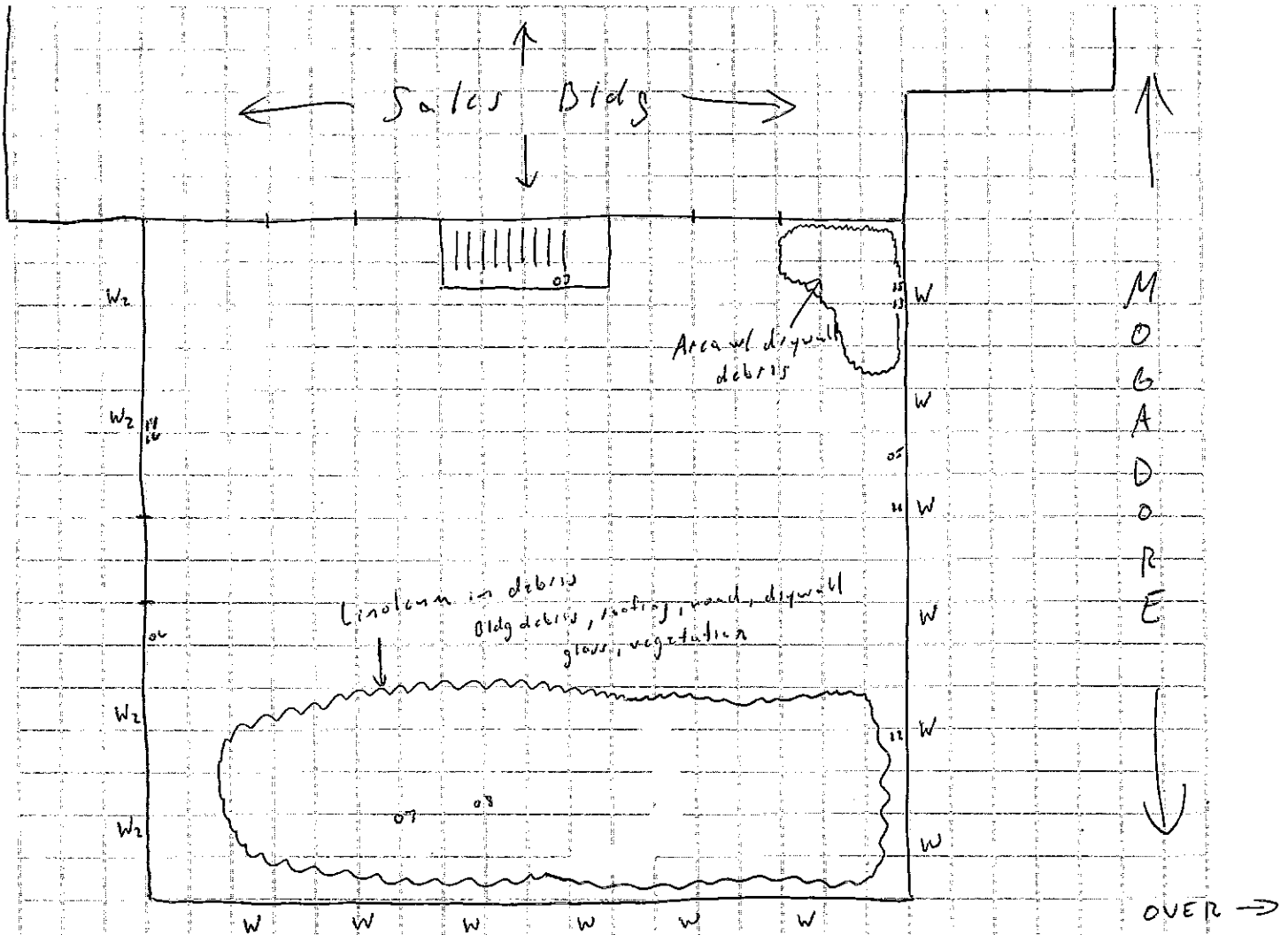
**Unit costs and estimated cost totals in this table are estimates only,  
and do not represent project specific cost estimates.**



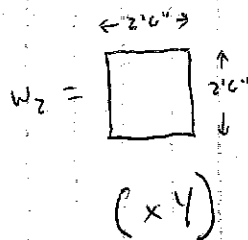
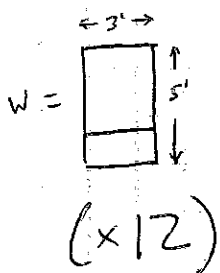
## **APPENDIX A**

Sampling Location Field Drawing(s)  
and  
Asbestos Inspection Data Sheet(s)

N ↑  <b>EA GROUP</b>	Work Order: OH40021
	Date: 6/1/16
Title: Office Bldg, Upper	Project: Bishopgate
	Prepared By: Kowall



No roof on Office Bldg, but roofing debris observed w/in & around bldg on the ground. It is unknown if roofing debris is from Office Bldg or from adjacent Sales Bldg which has portions of roof missing and is damaged.



Both window types have aluminum frames w/ some existing glazing. Big window sill adhesive only assoc. w/ 6 windows in E wall, Dtk adhesive on S wall sills and no adhesive assoc. w/ W walls. Each sill has 1/2 SF

N ↑



**EA GROUP**

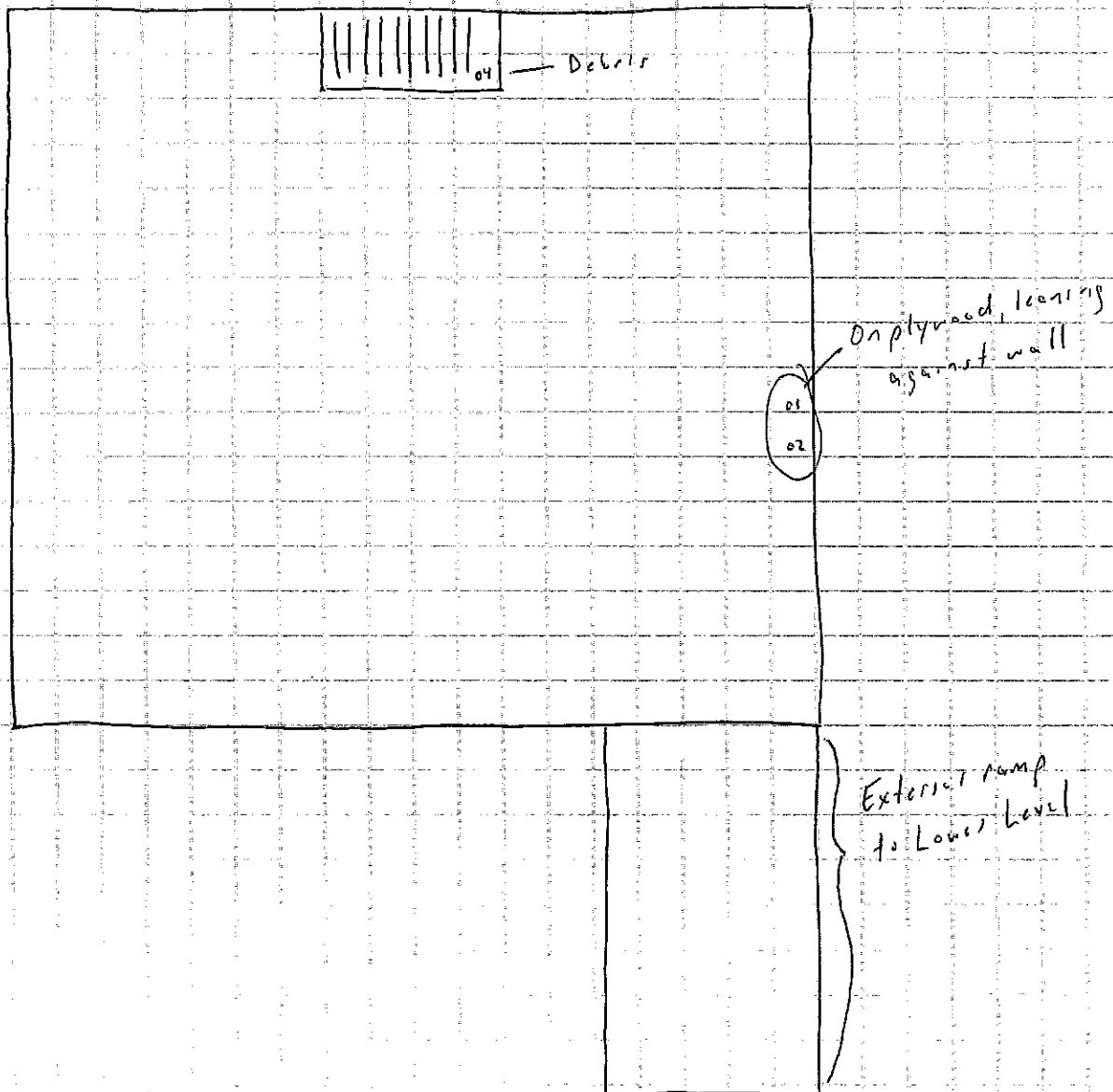
Title: Office Bldg, Lower

Work Order: OH40021


Date: 6/1/16

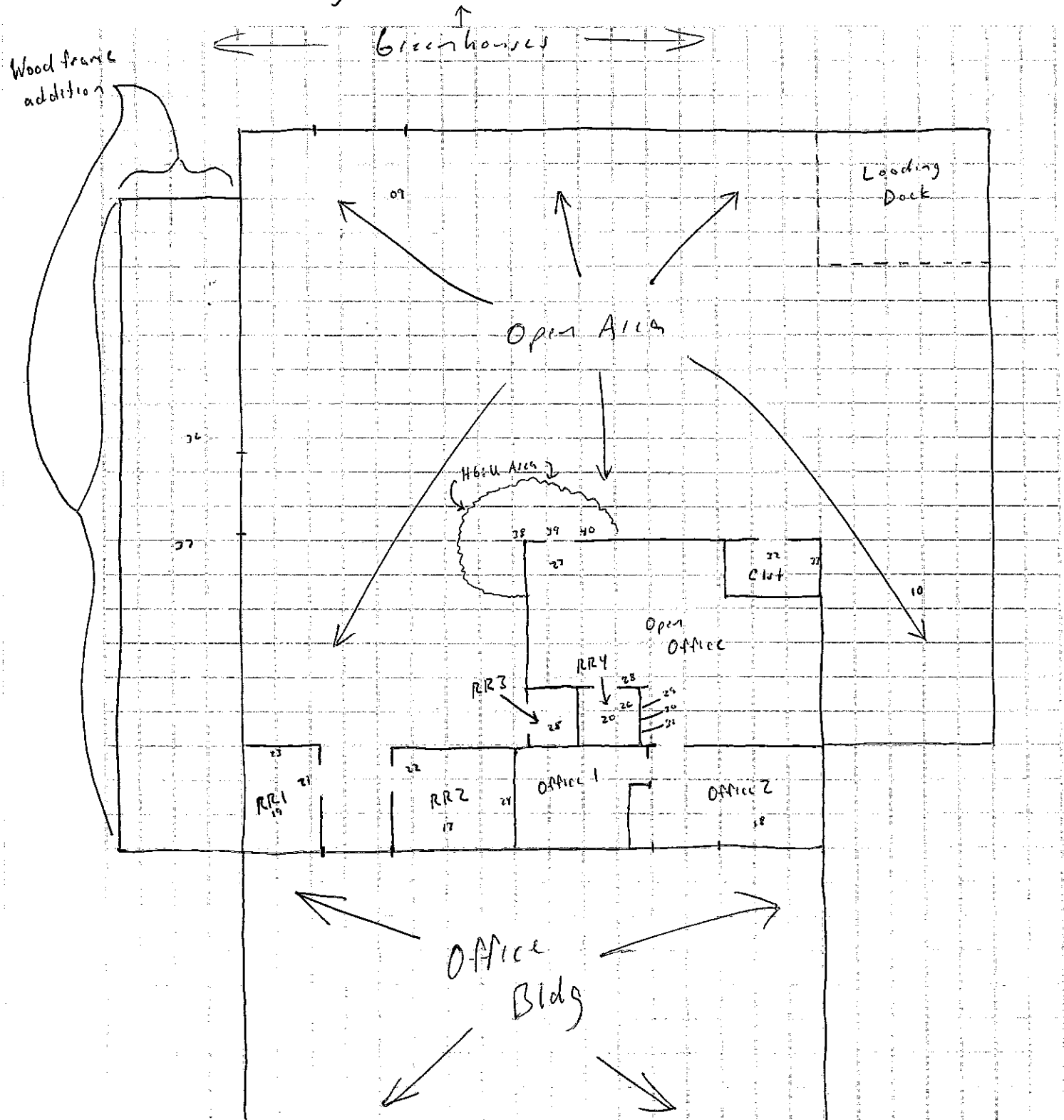
Project: Bishopgate


Prepared By: Kovell

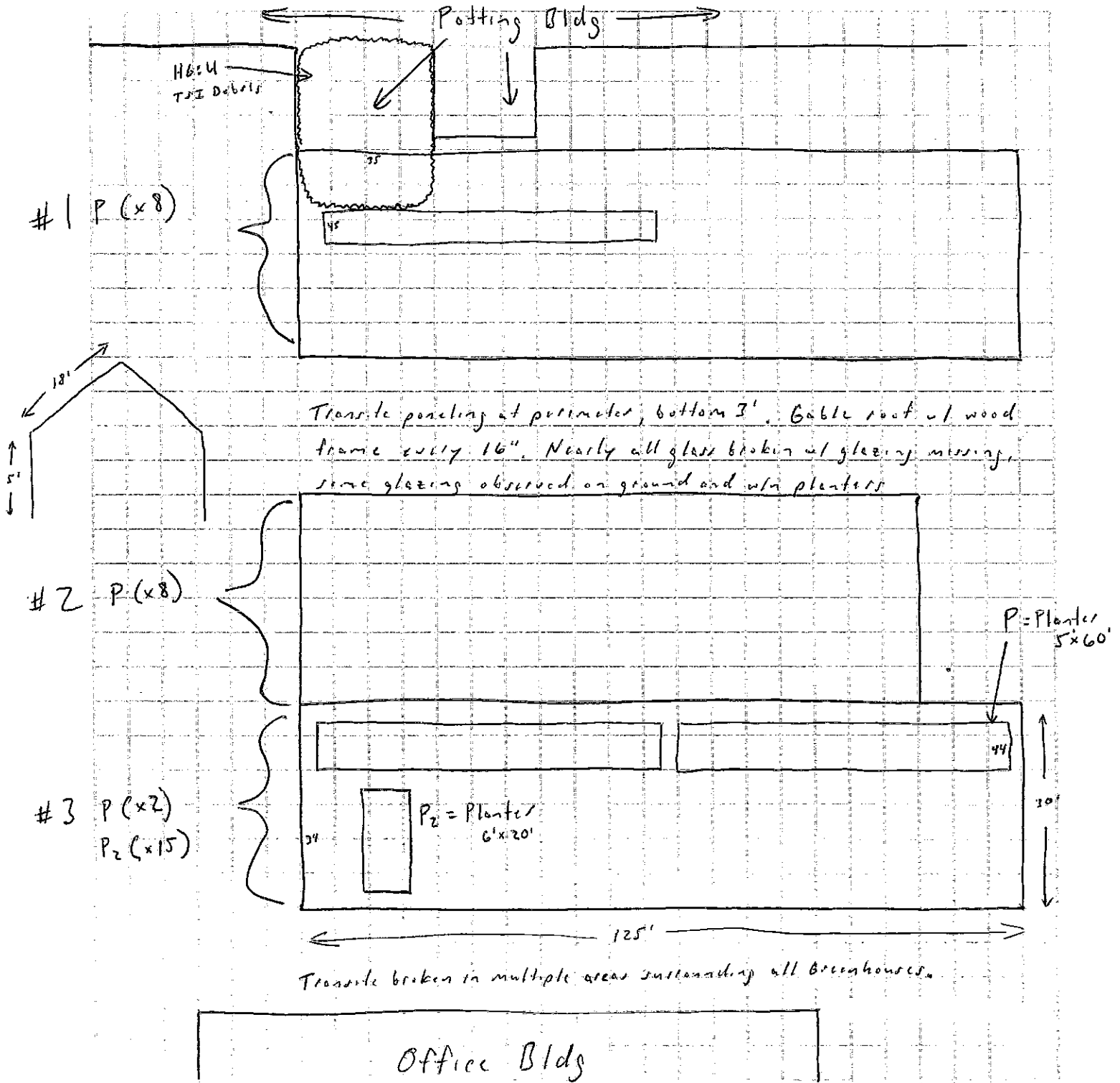





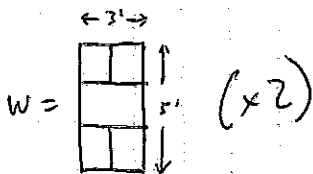
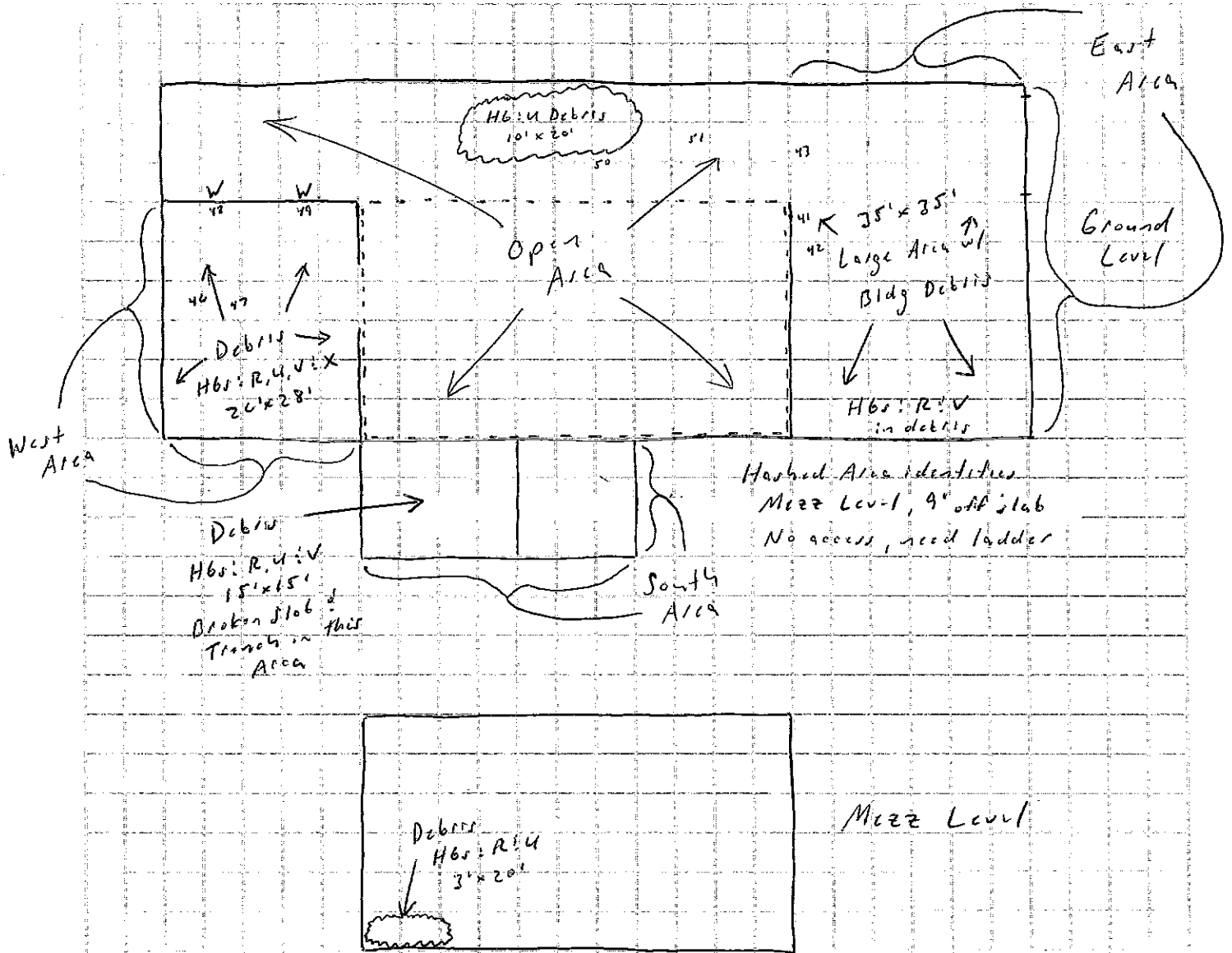
N ↑  <b>EA GROUP</b>	Work Order: <u>OH 40021</u>
	Date: <u>6/1/16</u>
Title: <u>Sales Bldg</u>	Project: <u>Bishopgate</u>
	Prepared By: <u>Kovell</u>



N↑  <b>EA GROUP</b>	Work Order: <b>OH40021</b>
	Date: <b>6/1/16</b>
Title: <b>Greenhouses 1, 2 &amp; 3</b>	Project: <b>Bishopgate</b>
	Prepared By: <b>Kovell</b>



<p>N ↑</p> <p></p> <p><b>EA GROUP</b></p>	<p>Work Order: 0H40021</p>
	<p>Date: 6/1/16</p>
<p>Title: Potting Bldg</p>	<p>Project: Bishopgate</p>
	<p>Prepared By: Kovell</p>



## ASBESTOS INSPECTION DATA SHEET KEY

<b>Client and Project</b>	Information provided by either Work Order or Scope of Work			
<b>Building -</b>	Name or address of building.			
<b>Functional Space -</b>	A room, group of rooms, or homogeneous area designated by the inspector to prepare management plans, design abatement projects, or conduct response actions.			
<b>Group No. -</b>	An arbitrary number/letter assigned to each homogeneous material (material that is uniform in color and texture, serves the same function, and was installed at the same time) encountered during sampling.			
<b>ID # -</b>	A sample number assigned by the inspector which begins with the work order number (OH XXXXX) at the top of the column and then a unique sample number for each sample.			
<b>Material Description -</b>	Distinguishing characteristics that may include system type, function, size, color, shape etc.			
<b>Location -</b>	Location of homogeneous material being sampled or occurrence of homogeneous material.			
<b>Quantity -</b>	Defined as linear footage (LF), square footage (SF), or number of fittings or miscellaneous items, each (EA)			
<b>Material Type -</b>	Abbreviations provided on the form as: <div><div>S - Surfacing Material (troweled or sprayed-on)</div><div>T - Thermal System Insulation</div><div>M - Miscellaneous</div><div>NF1 - Non-friable Category I</div><div>NF2 - Non-friable Category II</div></div>			
<b>Material Condition</b>	<div><div>ND - No Damage. The material is in visibly good condition with no apparent damage.</div><div>D - Damage. Material that has "Damage" is defined as damage to less than 10% of the entire homogeneous group or less than 25% of a localized section of the homogeneous group.</div><div>SD - Significant Damage. Material that is "Significantly Damaged" is defined as damage to greater than 10% of the entire homogeneous group or greater than 25% of a localized section of the homogeneous group.</div></div>			
<b>Cause of Damage -</b>	<div><div>P - Physical. Vandalism or accidental damage</div><div>W - Water. Water damage</div><div>D - Deterioration. Deterioration from age</div><div>Other - Additional influences that may cause damage</div></div>			
<b>Present Disturbance Factors</b>	Visible, Accessible, Air Movement, Activity, and Friable			
	Visible -	Can it be seen; Yes or No		
	Accessible -	Yes - The material is accessible to both the occupants of the building and custodial and maintenance personnel. No - The material is not easily accessible to people; i.e., crawl spaces, pipe tunnels, pipe chases, etc.		
	Air Movement -	Low - No air flow/plenum; air flow not recognizable to human touch. Medium - Air flow/plenum present; noticeable air flow; recognizable to human touch. High - Air flow/plenum/air handling unit/fan present; steady to gusty air flow; air flow obvious to human touch.		
	Activity -	Low - No traffic/vibrations. Medium - Moderate traffic and/or vibration. High - High traffic and/or continuous vibration.		
	Friable -	A material is considered friable if, when dry, it may be crumbled, pulverized, or reduced to powder by hand pressure.		
<b>Present Potential for Damage -</b>	Low Potential for Damage - Accessibility, Influence for Vibration and Air Erosion must be no, low or insignificant. Potential for Damage - Accessible with any combination of low or medium ratings in the Influence for Vibration and Air Erosion categories Potential for Significant Damage - Accessible with any combination with a high rating in Influence of Vibration and Air Erosion categories.			
<b>Hazard Assessment -</b>	Abbreviations provided on the form: PD = Potential for Damage; PSD = Potential for Significant Damage; 0 and Alphabetical abbreviations will be provided during reporting.			

EA GROUP

## ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio							
Project: Pre-Demolition Asbestos Survey					Functional Space: Office Building							
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES			
					Type	Cond						
Upper Level	B	03	Drywall System Debris	70	M/NF2		N	[+][0]				
	C	05	Adhesive; Black (on block wall & back of foam panels)	200	M/NF1		N	[+],B	Located on north, south, east and west rooms in patches or strips. Also remains on foam panel pieces on floor and within debris pile.			
	C	06	Adhesive; Black (on block wall & back of foam panels)		M/NF1		N	[+],B				
	D	07, 08	Linoleum Flooring; Orange Square Pattern	200	M/NF1		N	[+]	Located on north, south, east and west rooms in patches or strips			
	E	Assumed	Roofing Materials	50	M/NF1		N	[+]				
	F	11, 12	Adhesive; Gray (on windowsill)	3 [6 EA]	M/NF1		N	[+],B				
	G	13, 14	Window Glazing; Gray	12 [16 EA]	M/NF2		N	[+]				
	H	15, 16	Window Caulking; Gray					0				
	[southern section]	AA	---	Contaminated Debris Pile	67 CY	Mixed		Y	[+]			
	[northeast corner]	AA	---	Contaminated Debris Pile	11 CY	Mixed		Y	[+]			
	[throughout]	AB	---	Environmental Cleaning	3900	Mixed		Y	[+]			
	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%; vertical-align: top;"> <b><u>MATERIALS:</u></b>  <b><u>TYPE:</u></b>  S - Surfacing  T - Thermal  M - Miscellaneous  NF1 - Non-friable Cat. I  NF2 - Non-friable Cat. II  N/S = not suspect  <b><u>CONDITION:</u></b> [if relevant]  ND - No Damage  D - Damage  SD - Significant Damage </td> <td style="width: 33%; vertical-align: top;"> <b><u>QUANTITY</u></b> = Square Feet unless noted  LF = Linear Feet; EA = each    <b><u>FRIABLE:</u></b>  Y = Regulated ACM (RACM) by definition  N = not RACM by definition  NF1/NF2 may be friable due to condition or may become friable during reno/demo    <b><u>RESULT:</u></b>  0 - Non-ACM  [+] = ACM [no other assessment required]  B = Verified by layering/point counting </td> <td style="width: 33%; vertical-align: top;"> <b><u>COMMENTS:</u></b>    [+][0], [+][0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM  [+][M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes)  Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east &amp; south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken. </td> </tr> </table>										<b><u>MATERIALS:</u></b> <b><u>TYPE:</u></b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b><u>CONDITION:</u></b> [if relevant] ND - No Damage D - Damage SD - Significant Damage	<b><u>QUANTITY</u></b> = Square Feet unless noted LF = Linear Feet; EA = each  <b><u>FRIABLE:</u></b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo  <b><u>RESULT:</u></b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting
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<b>EA GROUP</b> 7118 Industrial Park Blvd. Mentor, OH 44060-5314 (440) 951-3514			EAG Technician(s): Mike Kovell  Survey Date(s): June 1, 2016		ES 34424		EAG OH40021  Page 1 of 8					

## ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio				
Project: Pre-Demolition Asbestos Survey					Functional Space: Office Building				
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
Lower Level w/ Ramp	A	01	9"x9" Floor Tile & mastic; Beige & brown					0	
	A	02	9"x9" Floor Tile & mastic; Beige & brown					0	
	B	04	Drywall System Debris	70	M/NF2		N	[+],B	
	E	Assumed	Roofing Materials	400	M/NF1		N	[+]	
Exterior/Perimeter/Ground	E	Assumed	Roofing Materials	300	M/NF1		N	[+]	
<b><u>MATERIALS:</u></b> <b><u>TYPE:</u></b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b><u>CONDITION:</u></b> [if relevant] ND - No Damage D - Damage SD - Significant Damage		<b><u>QUANTITY</u></b> = Square Feet unless noted LF = Linear Feet; EA = each <b><u>FRIABLE:</u></b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo <b><u>RESULT:</u></b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting		<b><u>COMMENTS:</u></b> [+] [0], [+] [0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM [+] [M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes) Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east & south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken.					
<b>EA GROUP</b> 7118 Industrial Park Blvd. Mentor, OH 44060-5314 (440) 951-3514			EAG Technician(s): Mike Kovell  Survey Date(s): June 1, 2016		ES 34424		EAG OH40021  Page 2 of 8		

## ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio				
Project: Pre-Demolition Asbestos Survey					Functional Space: Sales Building				
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
Restroom 1	I	---	Drywall System w/ stippling					0	
	J	19	Light Fixture Backing	1 [1 EA]	M		Y	[+]	
	K	21	12"x12" Floor Tile & mastic; Beige/Gray Mottling	65	M/NF1		N	[+],B[M]	
	L	23	4" Cove Base & mastic; Beige					0	
Restroom 2	I	17	Drywall System w/ stippling					0	
	J	---	Light Fixture Backing	1 [1 EA]	M		Y	[+]	
	K	22	12"x12" Floor Tile & mastic; Beige/Gray Mottling	120	M/NF1		N	[+],B[M]	
	L	24	4" Cove Base & mastic; Beige					0	
Restroom 3	J	---	Light Fixture Backing	1 [1 EA]	M		Y	[+]	
	M	25	1'x2' Ceiling Tile; Large & Medium Hole (no mastic or spline)					0	
Restroom 4	J	20	Light Fixture Backing	1 [1 EA]	M		Y	[+]	
	M	26	1'x2' Ceiling Tile; Large & Medium Hole (no mastic or spline)					0	
<b><u>MATERIALS:</u></b> <b><u>TYPE:</u></b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b><u>CONDITION:</u></b> [if relevant] ND - No Damage D - Damage SD - Significant Damage		<b><u>QUANTITY</u></b> = Square Feet unless noted LF = Linear Feet; EA = each <b><u>FRIABLE:</u></b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo <b><u>RESULT:</u></b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting		<b><u>COMMENTS:</u></b> [+] [0], [+] [0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM [+] [M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes) Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east & south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken.					
<b>EA GROUP</b> 7118 Industrial Park Blvd. Mentor, OH 44060-5314 (440) 951-3514			EAG Technician(s): Mike Kovell ES 34424 Survey Date(s): June 1, 2016		EAG OH40021 Page 3 of 8				

## ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio				
Project: Pre-Demolition Asbestos Survey					Functional Space: Sales Building				
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
Open Office	M	---	1'x2' Ceiling Tile; Large & Medium Hole (no mastic or spline)					0	
	N	27	Carpet Mastic; Yellow	475	M/NF1		N	[+],B	Carpet
	N	28	Carpet Mastic; Yellow		M/NF1		N	[+][0]	
	O	29	Plaster; Wall					0	
	O	30	Plaster; Wall					0	
	O	31	Plaster; Wall					0	
Office 1	I	---	Drywall System w/ stippling					0	
Office 2	I	18	Drywall System w/ stippling					0	
Open Area Closet	P	32	1'x1' Ceiling Tile; Solid (no mastic or spline)					0	
	P	33	1'x1' Ceiling Tile; Solid (no mastic or spline)					0	
Open Area	I	---	Drywall System w/ stippling					0	
	Q	09	Roofing Materials (Insulation); Brown					0	
	Q	10	Roofing Materials (Insulation); Brown					0	
<b>MATERIALS:</b> <b>TYPE:</b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b>CONDITION:</b> [if relevant] ND - No Damage D - Damage SD - Significant Damage		<b>QUANTITY</b> = Square Feet unless noted LF = Linear Feet; EA = each <b>FRIABLE:</b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo <b>RESULT:</b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting		<b>COMMENTS:</b> [+] [0], [+] [0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM [+] [M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes) Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east & south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken.					
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## ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio				
Project: Pre-Demolition Asbestos Survey					Functional Space: Sales Building				
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
Open Area	U	38	Insulation Debris; White	180	T		Y	[+]	
	U	39	Insulation Debris; White		T		Y	[+]	
	U	40	Insulation Debris; White		T		Y	[+]	
Wood Frame Addition	T	36	Adhesive; Brown	100	M/NF1		N	[+],B	Material is on wood furring and foam insulation.
	T	37	Adhesive; Brown		M/NF1		N	[+],B	
		E	Assumed	Roofing Materials	100	M/NF1		N	[+]
Throughout	AB	---	Environmental Cleaning	5250	Mixed		Y	[+]	
Exterior	E	Assumed	Roofing Materials	2500	M/NF1		N	[+]	Debris around perimeter of Sales Bldg is included in roofing quantity.
<b><u>MATERIALS:</u></b> <b><u>TYPE:</u></b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b><u>CONDITION:</u></b> [if relevant] ND - No Damage D - Damage SD - Significant Damage		<b><u>QUANTITY</u></b> = Square Feet unless noted LF = Linear Feet; EA = each <b><u>FRIABLE:</u></b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo <b><u>RESULT:</u></b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting		<b><u>COMMENTS:</u></b> [+] [0], [+] [0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM [+] [M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes) Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east & south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken.					
<b>EA GROUP</b> 7118 Industrial Park Blvd. Mentor, OH 44060-5314 (440) 951-3514			EAG Technician(s): Mike Kovell  Survey Date(s): June 1, 2016		ES 34424		EAG OH40021  Page 5 of 8		

## ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio							
Project: Pre-Demolition Asbestos Survey					Functional Space: Greenhouses							
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES			
					Type	Cond						
Greenhouse #3	R	Assumed	Transite Corrugated Paneling	930	M/NF2		N	[+]				
	S	34	Greenhouse Glazing	980	M/NF2		N	[+],B	Majority is missing; some observed on ground and some within planters.			
	W	44	Tar Paper associated with Concrete Planters in Greenhouses					0				
Greenhouse #2	R	Assumed	Transite Corrugated Paneling	930	M/NF2		N	[+]				
	S	---	Greenhouse Glazing	980	M/NF2		N	[+]				
	W	---	Tar Paper associated with Concrete Planters in Greenhouses					0				
Greenhouse #1  [extending to Potting Bldg]	R	Assumed	Transite Corrugated Paneling	930	M/NF2		N	[+]				
	S	35	Greenhouse Glazing	980	M/NF2		N	[+],B				
	U	---	Insulation Debris; White	100	T		Y	[+]	Estimated quantity for area requiring env clean-up; see drawing.			
	W	45	Tar Paper associated with Concrete Planters in Greenhouses					0				
	AB	---	Environmental Cleaning	375	Mixed		Y	[+]				
<table border="0" style="width: 100%;"> <tr> <td style="width: 33%; vertical-align: top;"> <b><u>MATERIALS:</u></b>  <b><u>TYPE:</u></b>  S - Surfacing  T - Thermal  M - Miscellaneous  NF1 - Non-friable Cat. I  NF2 - Non-friable Cat. II  N/S = not suspect  <b><u>CONDITION:</u></b> [if relevant]  ND - No Damage  D - Damage  SD - Significant Damage </td> <td style="width: 33%; vertical-align: top;"> <b><u>QUANTITY</u></b> = Square Feet unless noted  LF = Linear Feet; EA = each    <b><u>FRIABLE:</u></b>  Y = Regulated ACM (RACM) by definition  N = not RACM by definition  NF1/NF2 may be friable due to condition or may become friable during reno/demo    <b><u>RESULT:</u></b>  0 - Non-ACM  [+] = ACM [no other assessment required]  B = Verified by layering/point counting </td> <td style="width: 33%; vertical-align: top;"> <b><u>COMMENTS:</u></b>    [+][0], [0][0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM  [+][M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes)  Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east &amp; south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken. </td> </tr> </table>										<b><u>MATERIALS:</u></b> <b><u>TYPE:</u></b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b><u>CONDITION:</u></b> [if relevant] ND - No Damage D - Damage SD - Significant Damage	<b><u>QUANTITY</u></b> = Square Feet unless noted LF = Linear Feet; EA = each  <b><u>FRIABLE:</u></b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo  <b><u>RESULT:</u></b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting	<b><u>COMMENTS:</u></b>  [+][0], [0][0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM [+][M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes) Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east & south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken.
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# ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio				
Project: Pre-Demolition Asbestos Survey					Functional Space: Potting Building				
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
East Area	V	41	Insulation Debris; Gray					0	
	V	42	Insulation Debris; Gray					0	
	R	Assumed	Transite Corrugated Paneling	1225	M/NF2		N	[+]	Material is debris on floor with other building debris, abandoned items.
	AA	---	Contaminated Debris Pile	136 CY	Mixed		Y	[+]	
Open Area	V	43	Insulation Debris; Gray					0	
	Z	50	2'x4' Ceiling Panel; Fissure, Pinhole					0	
	Z	51	2'x4' Ceiling Panel; Fissure, Pinhole					0	
	AB	---	Environmental Cleaning	1800	Mixed		Y	[+]	
West Area	X	46	Gasket	2 [2 EA]	M/NF1		N	[+]	Material is debris on floor with other building debris, abandoned items.
	X	47	Gasket		M/NF1		N	[+]	
	Y	48	Window Glazing	2 EA	M/NF2		N	[+],B	
	Y	49	Window Glazing		M/NF2		N	[+],B	
	AB	---	Environmental Cleaning	728	Mixed		Y	[+]	
<b>MATERIALS:</b> <b>TYPE:</b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b>CONDITION:</b> [if relevant] ND - No Damage D - Damage SD - Significant Damage		<b>QUANTITY</b> = Square Feet unless noted LF = Linear Feet; EA = each <b>FRIABLE:</b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo <b>RESULT:</b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting		<b>COMMENTS:</b> [+] [0], [+] [0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM [+] [M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes) Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east & south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken.					
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## ASBESTOS INSPECTION DATA SHEET

Client: Pandey Environmental, LLC					Building: 12777 Mogadore Ave., N.W., Uniontown, Ohio				
Project: Pre-Demolition Asbestos Survey					Functional Space: Potting Building				
LOCATION	Group	ID # OH40021	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
South Area	U	---	Insulation Debris; White	225	T		Y	[+]	Material is debris on floor with other building debris, abandoned items.
	V	---	Insulation Debris; Gray					0	
	R	Assumed	Transite Corrugated Paneling	225	M/NF2		N	[+]	Material is debris on floor with other building debris, abandoned items.
Mezzanine Level	U	---	Insulation Debris; White	60	T		Y	[+]	Material is debris on floor with other building debris, abandoned items.
	V	---	Insulation Debris; Gray					0	
	R	Assumed	Transite Corrugated Paneling	60	M/NF2		N	[+]	Material is debris on floor with other building debris, abandoned items.
	AB	---	Environmental Cleaning	125	Mixed		Y	[+]	
Exterior/Perimeter/Ground	E	Assumed	Roofing Materials	6500	M/NF1		N	[+]	
<b><u>MATERIALS:</u></b> <b><u>TYPE:</u></b> S - Surfacing T - Thermal M - Miscellaneous NF1 - Non-friable Cat. I NF2 - Non-friable Cat. II N/S = not suspect <b><u>CONDITION:</u></b> [if relevant] ND - No Damage D - Damage SD - Significant Damage		<b><u>QUANTITY</u></b> = Square Feet unless noted LF = Linear Feet; EA = each <b><u>FRIABLE:</u></b> Y = Regulated ACM (RACM) by definition N = not RACM by definition NF1/NF2 may be friable due to condition or may become friable during reno/demo <b><u>RESULT:</u></b> 0 - Non-ACM [+] = ACM [no other assessment required] B = Verified by layering/point counting		<b><u>COMMENTS:</u></b> [+] [0], [+] [0,B] = Sample non-ACM or trace but at least one other sample from Group confirmed ACM; Group considered ACM [+] [M] = Floor Tile non-ACM; Mastic ACM (Group as a whole considered ACM for removal purposes) Group R: Some areas are broken and on ground within vegetation. On west end there is a trench w/ debris mixed with other building materials. Transite found relatively intact or broken and remains close to Greenhouse footprints on north, east & south sides. On west end transite is found in vegetation as far as 20 LF from footprint and is the area with the most broken.					
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## **APPENDIX B**

Laboratory Analytical Report(s)



Pandey Environmental  
673 Mohawk St., Suite 300  
Columbus, OH 43206  
Atul Pandey

Client Project Bishopgate-Asb Survey

EA Group Workorder Number: 160600045

Received on June 2, 2016

The following analytical report contains results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data has been found to be compliant with accepted laboratory protocol, except as noted in the QC narrative. Industrial hygiene reports, air and/or surface concentrations results are based upon sampling information provided by the client. Industrial hygiene results will not be blank corrected. Analyst initials of REF indicate analysis performed at a subcontract facility.

If you have questions, comments or require further assistance regarding this report, please contact your client services representative or one of the individuals listed below.

Data or reporting:

Debbie Lauer - Lab Manager  
dlauer@eagroupohio.com

Mike Herbert - General Manager  
mherbert@eagroupohio.com

Sample tracking, supplies:

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## **Laboratory Analytical Report**

**Pandey Environmental**  
673 Mohawk St., Suite 300  
Columbus, OH 43206

Attention:  
Atul Pandey

### **Project Identification**

Bishopgate-Asb Survey

OH40021

### **Purchase Order:**

**EA Group**  
**Order Number**  
**1606-00045**

Carl R. Eggebraaten  
Microscopist

Deborah L. Lauer  
Laboratory Manager

June 10, 2016



## **Project Summary**

The following analytical report contains the results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data have been found to be compliant with accepted laboratory protocol. Exceptions, if any, are noted below.

## **Sample Summary**

Sample Receive Date: 6/ 2/2016

EAG	Client	EAG	Client
<u>Sample Identification</u>	<u>Sample Identification</u>	<u>Sample Identification</u>	<u>Sample Identification</u>
160600045-01A	OH40021-01	160600045-01B	OH40021-01
160600045-02A	OH40021-02	160600045-02B	OH40021-02
160600045-03A	OH40021-03	160600045-03B	OH40021-03
160600045-04A	OH40021-04	160600045-04B	OH40021-04
160600045-05A	OH40021-05	160600045-06A	OH40021-06
160600045-07A	OH40021-07	160600045-08A	OH40021-08
160600045-09A	OH40021-09	160600045-10A	OH40021-10
160600045-11A	OH40021-11	160600045-12A	OH40021-12
160600045-13A	OH40021-13	160600045-14A	OH40021-14
160600045-15A	OH40021-15	160600045-16A	OH40021-16
160600045-17A	OH40021-17	160600045-17B	OH40021-17
160600045-18A	OH40021-18	160600045-18B	OH40021-18
160600045-19A	OH40021-19	160600045-20A	OH40021-20
160600045-21A	OH40021-21	160600045-21B	OH40021-21
160600045-21C	OH40021-21	160600045-22A	OH40021-22
160600045-22B	OH40021-22	160600045-22C	OH40021-22
160600045-23A	OH40021-23	160600045-24A	OH40021-24
160600045-25A	OH40021-25	160600045-26A	OH40021-26
160600045-27A	OH40021-27	160600045-27B	OH40021-27
160600045-28A	OH40021-28	160600045-28B	OH40021-28
160600045-29A	OH40021-29	160600045-30A	OH40021-30
160600045-31A	OH40021-31	160600045-32A	OH40021-32
160600045-33A	OH40021-33	160600045-34A	OH40021-34
160600045-35A	OH40021-35	160600045-36A	OH40021-36
160600045-37A	OH40021-37	160600045-38A	OH40021-38
160600045-39A	OH40021-39	160600045-40A	OH40021-40
160600045-41A	OH40021-41	160600045-42A	OH40021-42
160600045-43A	OH40021-43	160600045-44A	OH40021-44
160600045-45A	OH40021-45	160600045-46A	OH40021-46
160600045-47A	OH40021-47	160600045-48A	OH40021-48
160600045-49A	OH40021-49	160600045-50A	OH40021-50
160600045-51A	OH40021-51		

## **Quality Control Narrative**





### **Project Summary**

The following analytical report contains the results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data have been found to be compliant with accepted laboratory protocol. Exceptions, if any, are noted below.

### **Sample Summary**

Sample Receive Date: 6/ 2/2016

EAG	Client	EAG	Client
<u>Sample Identification</u>	<u>Sample Identification</u>	<u>Sample Identification</u>	<u>Sample Identification</u>

This report contains data which was produced by a subcontracted laboratory

NVLAP Lab Code 101165-0 for Asbestos Analysis.

IATL, Inc.

9000 Commerce Parkway, Suite B

Mt. Laurel, NJ 08054

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Workorder: 1606-00045

Page: 1

EAG ID: 1606-00045-01A

Client ID: OH40021-01

Matrix: Bulk

Date Sampled: 06/01/2016

Date Received: 06/02/2016

Date Analyzed: 06/09/2016

Analyst: REF

**Parameter**

**Result**

Asbestos Analysis - Bulk

% Chrysotile Asbestos

ND

% Amosite Asbestos

ND

% Crocidolite Asbestos

ND

% Other Asbestos Fibers

ND

% Other Non-Asbestos Mat'ls

100

Analysis Comments

NA

**Sample Physical Description:** Tan vinyl sheet flooring

EAG ID: 1606-00045-01B

Client ID: OH40021-01

Matrix: Bulk

Date Sampled: 06/01/2016

Date Received: 06/02/2016

Date Analyzed: 06/09/2016

Analyst: REF

**Parameter**

**Result**

Asbestos Analysis - Bulk

% Chrysotile Asbestos

ND

% Amosite Asbestos

ND

% Crocidolite Asbestos

ND

% Other Asbestos Fibers

ND

% Other Non-Asbestos Mat'ls

100

Analysis Comments

NA

**Sample Physical Description:** Yellow mastic

EAG ID: 1606-00045-02A

Client ID: OH40021-02

Matrix: Bulk

Date Sampled: 06/01/2016

Date Received: 06/02/2016

Date Analyzed: 06/09/2016

Analyst: REF

**Parameter**

**Result**

Asbestos Analysis - Bulk

% Chrysotile Asbestos

ND

% Amosite Asbestos

ND

% Crocidolite Asbestos

ND

% Other Asbestos Fibers

ND

% Other Non-Asbestos Mat'ls

100

Analysis Comments

NA

**Sample Physical Description:** Tan vinyl sheet flooring

EAG ID: 1606-00045-02B

Client ID: OH40021-02

Matrix: Bulk

Date Sampled: 06/01/2016

Date Received: 06/02/2016

Date Analyzed: 06/09/2016

Analyst: REF

**Parameter**

**Result**

Asbestos Analysis - Bulk

% Chrysotile Asbestos

ND

% Amosite Asbestos

ND

% Crocidolite Asbestos

ND

% Other Asbestos Fibers

ND

% Other Non-Asbestos Mat'ls

100

Analysis Comments

NA

**Sample Physical Description:** Yellow mastic

Workorder: 1606-00045

Page: 2

**EAG ID:** 1606-00045-03A      **Client ID:** OH40021-03      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA
<b>Sample Physical Description:</b>	Off white/tan sheetrock

**EAG ID:** 1606-00045-03B      **Client ID:** OH40021-03      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA
<b>Sample Physical Description:</b>	Yellow mastic

**EAG ID:** 1606-00045-04A      **Client ID:** OH40021-04      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA
<b>Sample Physical Description:</b>	Off white/tan sheetrock

**EAG ID:** 1606-00045-04B      **Client ID:** OH40021-04      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** White joint compound

See note on last page.

**EAG ID:** 1606-00045-05A      **Client ID:** OH40021-05      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** Gray caulk

**EAG ID:** 1606-00045-06A      **Client ID:** OH40021-06      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** Gray caulk

**EAG ID:** 1606-00045-07A      **Client ID:** OH40021-07      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	20
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	80
Analysis Comments	NA

**Sample Physical Description:** Orange vinyl sheet flooring

**EAG ID:** 1606-00045-08A      **Client ID:** OH40021-08      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	20
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	80
Analysis Comments	NA

**Sample Physical Description:** Orange vinyl sheet flooring

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**EAG ID:** 1606-00045-09A      **Client ID:** OH40021-09      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Brown fibrous

**EAG ID:** 1606-00045-10A      **Client ID:** OH40021-10      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Brown fibrous

**EAG ID:** 1606-00045-11A      **Client ID:** OH40021-11      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	4
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	96
Analysis Comments	*

**Sample Physical Description:** Gray caulk

**EAG ID:** 1606-00045-12A      **Client ID:** OH40021-12      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	5
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	95
Analysis Comments	*

**Sample Physical Description:** Gray caulk

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**EAG ID:** 1606-00045-13A      **Client ID:** OH40021-13      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	10
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	90
Analysis Comments	NA

**Sample Physical Description:** Gray putty

**EAG ID:** 1606-00045-14A      **Client ID:** OH40021-14      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	10
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	90
Analysis Comments	NA

**Sample Physical Description:** Gray putty

**EAG ID:** 1606-00045-15A      **Client ID:** OH40021-15      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Gray caulk

**EAG ID:** 1606-00045-16A      **Client ID:** OH40021-16      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Gray caulk

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**EAG ID:** 1606-00045-17A      **Client ID:** OH40021-17      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White/tan sheetrock

**EAG ID:** 1606-00045-17B      **Client ID:** OH40021-17      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White joint compound

**EAG ID:** 1606-00045-18A      **Client ID:** OH40021-18      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White/tan sheetrock

**EAG ID:** 1606-00045-18B      **Client ID:** OH40021-18      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White joint compound

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**EAG ID:** 1606-00045-19A      **Client ID:** OH40021-19      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	30
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	70
Analysis Comments	NA

**Sample Physical Description:** Gray wrap

**EAG ID:** 1606-00045-20A      **Client ID:** OH40021-20      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	30
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	70
Analysis Comments	NA

**Sample Physical Description:** Gray wrap

**EAG ID:** 1606-00045-21A      **Client ID:** OH40021-21      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Tan floor tile

**EAG ID:** 1606-00045-21B      **Client ID:** OH40021-21      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	6
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	94
Analysis Comments	*

**Sample Physical Description:** Black mastic



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**EAG ID:** 1606-00045-21C      **Client ID:** OH40021-21      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Tan fibrous

**EAG ID:** 1606-00045-22A      **Client ID:** OH40021-22      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Tan floor tile

**EAG ID:** 1606-00045-22B      **Client ID:** OH40021-22      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	5
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	95
Analysis Comments	*

**Sample Physical Description:** Black mastic

**EAG ID:** 1606-00045-22C      **Client ID:** OH40021-22      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Tan fibrous

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**EAG ID:** 1606-00045-23A      **Client ID:** OH40021-23      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Tan cove base

**EAG ID:** 1606-00045-24A      **Client ID:** OH40021-24      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Tan cove base

**EAG ID:** 1606-00045-25A      **Client ID:** OH40021-25      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White/brown ceiling tile

**EAG ID:** 1606-00045-26A      **Client ID:** OH40021-26      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White/brown ceiling tile

**EAG ID:** 1606-00045-27A      **Client ID:** OH40021-27      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Yellow mastic

**EAG ID:** 1606-00045-27B      **Client ID:** OH40021-27      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** Gray cementitious

**EAG ID:** 1606-00045-28A      **Client ID:** OH40021-28      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Yellow mastic

**EAG ID:** 1606-00045-28B      **Client ID:** OH40021-28      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Orange non fibrous

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**EAG ID:** 1606-00045-29A

**Client ID:** OH40021-29

**Matrix:** Bulk

**Date Sampled:** 06/01/2016

**Date Received:** 06/02/2016

**Date Analyzed:** 06/09/2016

**Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White cementitious

**EAG ID:** 1606-00045-30A

**Client ID:** OH40021-30

**Matrix:** Bulk

**Date Sampled:** 06/01/2016

**Date Received:** 06/02/2016

**Date Analyzed:** 06/09/2016

**Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White cementitious

**EAG ID:** 1606-00045-31A

**Client ID:** OH40021-31

**Matrix:** Bulk

**Date Sampled:** 06/01/2016

**Date Received:** 06/02/2016

**Date Analyzed:** 06/09/2016

**Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** White cementitious

**EAG ID:** 1606-00045-32A

**Client ID:** OH40021-32

**Matrix:** Bulk

**Date Sampled:** 06/01/2016

**Date Received:** 06/02/2016

**Date Analyzed:** 06/09/2016

**Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Brown/white ceiling tile

**EAG ID:** 1606-00045-33A      **Client ID:** OH40021-33      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Brown/white ceiling tile

**EAG ID:** 1606-00045-34A      **Client ID:** OH40021-34      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** White glazing

**EAG ID:** 1606-00045-35A      **Client ID:** OH40021-35      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	3
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	97
Analysis Comments	*

**Sample Physical Description:** White glazing

**EAG ID:** 1606-00045-36A      **Client ID:** OH40021-36      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** Brown caulk

**EAG ID:** 1606-00045-37A      **Client ID:** OH40021-37      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** Brown caulk

**EAG ID:** 1606-00045-38A      **Client ID:** OH40021-38      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	60
% Crocidolite Asbestos	10
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	30
Analysis Comments	NA

**Sample Physical Description:** White insulation

**EAG ID:** 1606-00045-39A      **Client ID:** OH40021-39      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	60
% Crocidolite Asbestos	10
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	30
Analysis Comments	NA

**Sample Physical Description:** White insulation

**EAG ID:** 1606-00045-40A      **Client ID:** OH40021-40      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	60
% Crocidolite Asbestos	10
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	30
Analysis Comments	NA

**Sample Physical Description:** White insulation

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**EAG ID:** 1606-00045-41A      **Client ID:** OH40021-41      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Gray insulation

**EAG ID:** 1606-00045-42A      **Client ID:** OH40021-42      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Gray insulation

**EAG ID:** 1606-00045-43A      **Client ID:** OH40021-43      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Gray insulation

**EAG ID:** 1606-00045-44A      **Client ID:** OH40021-44      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Black roof material

**EAG ID:** 1606-00045-45A      **Client ID:** OH40021-45      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

**Sample Physical Description:** Black roof material

**EAG ID:** 1606-00045-46A      **Client ID:** OH40021-46      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	70
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	30
Analysis Comments	NA

**Sample Physical Description:** White woven material

**EAG ID:** 1606-00045-47A      **Client ID:** OH40021-47      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	70
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	30
Analysis Comments	NA

**Sample Physical Description:** White woven material

**EAG ID:** 1606-00045-48A      **Client ID:** OH40021-48      **Matrix:** Bulk  
**Date Sampled:** 06/01/2016      **Date Received:** 06/02/2016      **Date Analyzed:** 06/09/2016      **Analyst:** REF

<u>Parameter</u>	<u>Result</u>
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	2
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	98
Analysis Comments	*

**Sample Physical Description:** Off white glazing



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**EAG ID:** 1606-00045-49A

**Client ID:** OH40021-49

**Matrix:** Bulk

**Date Sampled:** 06/01/2016

**Date Received:** 06/02/2016

**Date Analyzed:** 06/09/2016

**Analyst:** REF

**Parameter**

**Result**

Asbestos Analysis - Bulk

% Chrysotile Asbestos

2

% Amosite Asbestos

ND

% Crocidolite Asbestos

ND

% Other Asbestos Fibers

ND

% Other Non-Asbestos Mat'ls

98

Analysis Comments

\*

**Sample Physical Description:** Off white glazing

**EAG ID:** 1606-00045-50A

**Client ID:** OH40021-50

**Matrix:** Bulk

**Date Sampled:** 06/01/2016

**Date Received:** 06/02/2016

**Date Analyzed:** 06/09/2016

**Analyst:** REF

**Parameter**

**Result**

Asbestos Analysis - Bulk

% Chrysotile Asbestos

ND

% Amosite Asbestos

ND

% Crocidolite Asbestos

ND

% Other Asbestos Fibers

ND

% Other Non-Asbestos Mat'ls

100

Analysis Comments

NA

**Sample Physical Description:** White/tan ceiling tile

**EAG ID:** 1606-00045-51A

**Client ID:** OH40021-51

**Matrix:** Bulk

**Date Sampled:** 06/01/2016

**Date Received:** 06/02/2016

**Date Analyzed:** 06/09/2016

**Analyst:** REF

**Parameter**

**Result**

Asbestos Analysis - Bulk

% Chrysotile Asbestos

ND

% Amosite Asbestos

ND

% Crocidolite Asbestos

ND

% Other Asbestos Fibers

ND

% Other Non-Asbestos Mat'ls

100

Analysis Comments

NA

**Sample Physical Description:** White/tan ceiling tile



Workorder: 160600045

These samples were analyzed as received for percentage composition of Asbestos and Non-Asbestos materials by Method(s)  
EPA-600/M4-82-020, December 1982 and/or EPA/600/R 93/116 July 1993, which have Detection Limits of less than 1% Asbestos.

The measurement of asbestos percentage is determined by visual estimation. Uncertainty is calculated quarterly in accordance with NISTIR 5951 by Verkouteren and Duewer. Please contact EA Group for the most recent information.

Asbestos Containing Materials (ACM) and Presumed Asbestos Containing Materials (PACM) are regulated by several different governmental regulatory agencies.

EPA NESHAP regulations cover certain buildings that are to be renovated or demolished. NESHAP regulations require that when a sample (or layer of a multi-layered sample) is analyzed and found to contain asbestos at a concentration of less than 10% by a method other than point counting by Polarized Light Microscopy (PLM), the owner/operator has the option of:

- 1) Assuming the amount to be greater than 1% and treating the material as regulated ACM.
- OR
- 2) Requesting verification of the amount by point counting.

Building owners/operators covered by NESHAP should review the following for the full and specific regulations:

- 1) Federal Register, Vol. 55, No. 224, Tuesday, November 20, 1990
- 2) Clarification of NESHAP requirement to perform point counting, May 8, 1991
- 3) Federal Register, Vol. 59, No. 3, Wednesday, January 5, 1994
- 4) Federal Register, Vol. 59, No. 146, Monday, August 1, 1994
- 5) Federal Register, Vol. 60, No. 243, Tuesday, December 19, 1995

Building owners/operators and employers covered by OSHA regulations also have specific requirements regarding ACM and PACM. Those who may be covered by these regulations should review 29 CFR 1910.1001 and 29 CFR 1926.1101 for specific requirements.

FLOOR TILES: PLM should only be considered a screening method for floor tile analysis. Any floor tile with a result of one percent or less asbestos by PLM should be assumed positive for asbestos until the sample is re-analyzed by Analytical Electron Microscopy.

Other difficult matrices (such as bituminous, organically bound, and cementitious materials) may obscure very small asbestos fibers. Some samples may also contain asbestos fibers with diameters below the limit of resolution of the optical microscopes used in typical PLM analysis. Therefore, negative results by PLM on these materials should be confirmed by Analytical Electron Microscopy.

EA Group has a sample retention policy of at least 30 days. After that time, the samples will be disposed of unless the client has requested that they be returned. The client will be charged a shipping and handling fee associated with returned samples only.

Key to analysis comments (if noted on samples):

- \* Asbestos content in this sample has been verified by the Chalkley point counting procedure.
- \*\* The client has the option of requesting verification of this analytical result by point counting as specified by the NESHAP standards.
- \*\*\* Insufficient sample amount for quantitation and/or performing Quality Control functions.
- \*\*\*\* Due to the nature of the sample (dust, debris, soil, or vacuum), percentages for the constituents could not be assigned.
- + After gravimetric reduction, the residue has been visually estimated as at least 10% asbestos. Therefore, point counting is not required to satisfy NESHAP requirements.
- ++ Contains fibers that may be an asbestos mineral but could not be positively identified by PLM. Analysis by Transmission Electron Microscopy (TEM) is recommended.
- +++ See additional comment under Quality Control Narrative.
- # This sample contains vermiculite mineral. It is not vermiculite attic insulation.

ND	None Detected
Trace	Observed but less than 1%
NH	Non-Homogeneous sample, the result reflects the average.
Und. non-asb	Undetermined non-asbestos fibers

This report applies only to sample(s) analyzed and may not be used by the client to claim product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

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# FIELD REQUEST FOR LABORATORY ANALYSIS

Company Name: Pandey Environmental  
Address: 673 Mohawk St., Suite 300  
Columbus, OH 43206  
Attention: Atul Pandey  
Customer Number: 0012608

Results Needed By: \_\_\_\_\_  
Normal: ☒ **RUSH:** \_\_\_\_\_  
Priority: \_\_\_\_\_ (confirm w/ lab)  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

Telephone: 614-444-8078

Fax No: 614-444-8079

e-mail: \_\_\_\_\_

Sampled by: Kovell

Project Name: Bishopgate - Asb Survey

Project Number OH 40021

Rush Authorized by: \_\_\_\_\_

Project Category: ASB

Special Billing/Reporting: \_\_\_\_\_

Is this a VAP project requiring VAP lab analysis? Yes ☒ No ☐

Internal Contact: Bowen

## CHAIN OF CUSTODY

### Relinquished by

Name	Date/Time
<u>Atul Pandey</u>	<u>6/2/16 1:530</u>

### Received by

Name	Date/Time
<u>[Signature]</u>	<u>6/2/16 1:530</u>

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**EA GROUP CONSULTING DIVISION  
REQUEST FOR LABORATORY ANALYSIS - ASBESTOS BULK SAMPLING LOG**

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Sample No.	Homog. Group	1	2
DH40021-01	A	X	
02	↓		
03	B		
04	↓		
05	C		
06	↓		
07	D		
08	↓		
09	G		
10	↓		
11	F		
12	↓		
13	G		
14	↓		
15	H		
16	↓		
17	I		
18	↓		
19	J		
20	↓		

Sample No.	Homog. Group	1	2
DH40021-21	K	X	
22	↓		
23	L		
24	↓		
25	M		
26	↓		
27	N		
28	↓		
29	O		
30	↓		
31			
32	P		
33	↓		
34	J		
35	↓		
36	T		
37	↓		
38	U		
39	↓		
40			

Sample No.	Homog. Group	1	2
DH40021-41	V	X	
42	↓		
43			
44	W		
45	↓		
46	X		
47	↓		
48	Y		
49	↓		
50	Z		
51	↓		

Analytes: 1 PLM (standard) 2 PLM (full) Point Count:      or ALL (enter # or circle ALL)

Hygienist: Kovell Sampling Date: 6/1/16

Comments: Samples require point count to 5% and must be returned to login